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Entered as Second-Class Matter May 29, 1891, at the Post Office at Chicago, Ill., under Act of March 3, 1879
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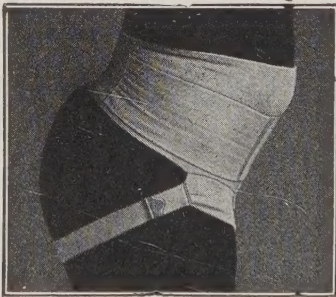
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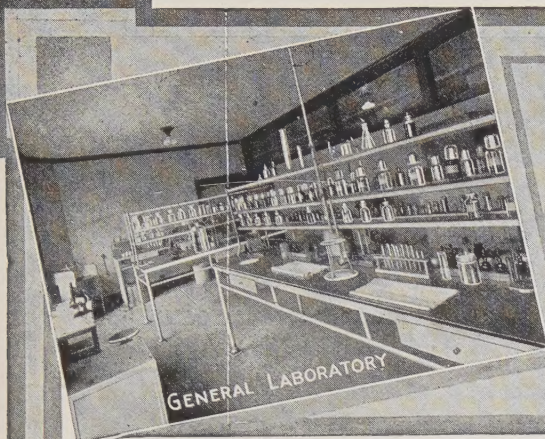
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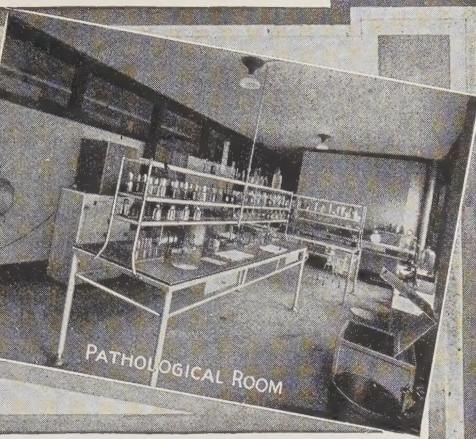
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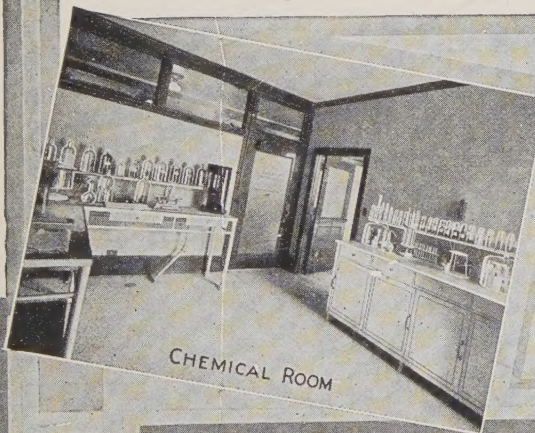
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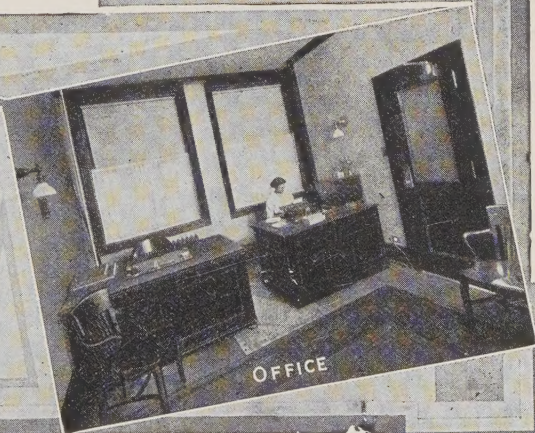
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Contents



Original Articles

Ununited Fractures. By Dr. Willis C. Campbell.....	271
Open and Closed Reduction of Fractures. By Dr. Fred W. Bailey.....	276
Discussion by Doctors F. F. Lawrence, William T. Coughlin and John De J. Pemberton.....	280
From Parent to Offspring. By Casper L. Redfield.....	283
Franconia Notch. By Dr. Charles J. Drueck.....	287
The Rockefeller Foundation. By George E. Vincent.....	291
Training of Midwives. By Taliaferro Clark, U. S. P. H. S.....	297

(Continued on page 6)

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CONTENTS—Continued

Editorials

Liquor Prescribing	305
Industrial Aspects of Heart Disease.....	307
Personal Items.....	308
Defense Test	309

Book Reviews

Mental Training for the Pre-School Age. By Lillian J. Martin.....	316
Radium Report of the Memorial Hospital, New York.....	316
The Surgical Clinics of North America. Vol IV., No. 1.....	317

News Items	318
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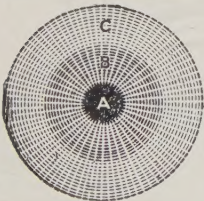
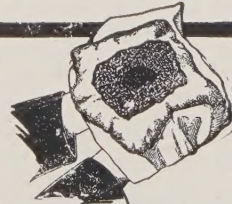


Diagram represents inflamed area. In zone "C" blood is flowing freely through underlying vessels. This forms a current away from the Antiphlogistine, whose liquid contents, therefore, follow the line of least resistance and enter the circulation through the physical process of endosmosis. In zone "A" there is stasis, no current tending to overcome Antiphlogistine's hygroscopic property. The line of least resistance for the liquid exudate is therefore, in the direction of the Antiphlogistine. In obedience to the same law exosmosis is going on in this zone, and the excess of moisture is thus accounted for.



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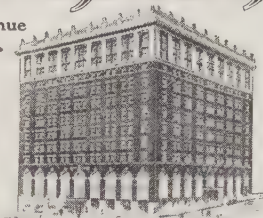
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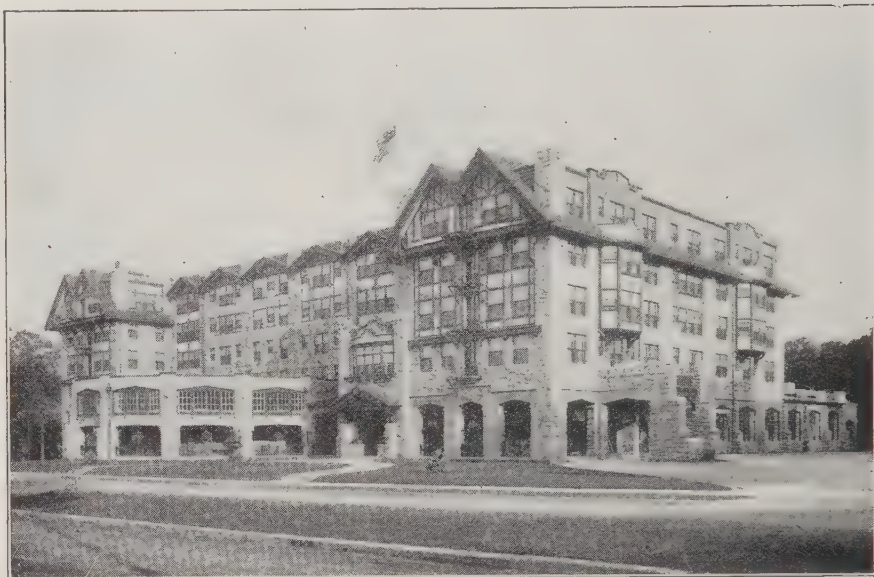
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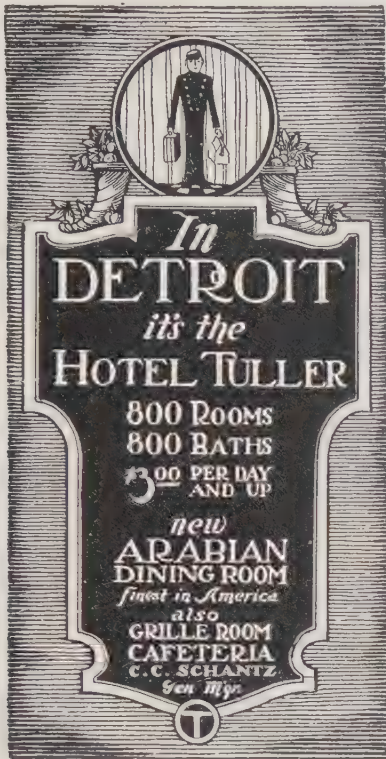
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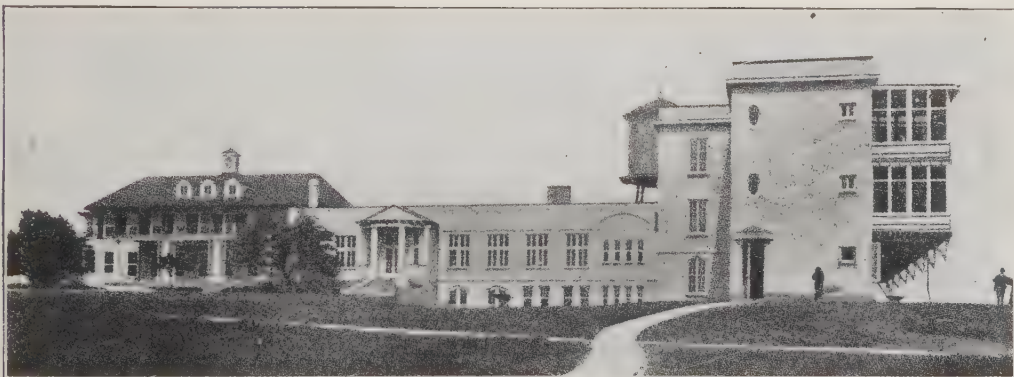
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UNUNITED FRACTURES*

By WILLIS C. CAMPBELL, Memphis, Tenn.

A fracture is usually classed as ununited when there is free motion between fragments at the end of six months, however, there is no arbitrary time when distinction can be made between "delayed" and non-union. If stability gradually increases the prognosis for solid union is good, and only after a stationary period has been reached without effort to consolidate can the fracture be designated "ununited." The length of time differs as to the seat of the fracture, local and constitutional conditions. For instance, if no union occurs in a central or intra-capsular fracture of the neck of the femur at the end of eight weeks, in all probability an ununited fracture exists. Failure of bony union is more frequent in the neck of the femur than elsewhere, and presents such a distinct and definite problem that a brief discussion will be made of ununited fractures of this region, before considering this condition in other bones.

A complete report of cases and methods used in the treatment of ununited fractures of the neck of the femur has been published in previous contributions. Clinical experience teaches us that under the most favorable circumstances union is delayed in this region and, as stated, a permanent status of non-union is reached much earlier, consequently, radical measures are instituted sooner which consist in inserting a massive autogenous graft from the tibia or fibula, through the neck of the femur across the line of fracture, thus holding the fragments together. By this method we have operated in over fifty cases and have found that bony union, with satisfactory results, decreases inversely as the length of time increases after the occurrence of the fracture. In all those cases operated under one year solid bony union was obtained, during the second year, in over fifty per cent and thereafter the chance of of success rapidly

*Read before the Mississippi Valley Medical Assn., Hot Springs, Ark., October 9-11, 1923.

declines. The autogenous graft of dense into spongy bone is usually absorbed, but may remain in situ without apparent change for many years—in one case five years.

Ununited fractures of other points of the skeleton occur with increasing frequency, which might be the sequence to the actual occurrence of a greater number of fractures, as a result of the development of the automobile and other industrial activities, but the quantity alone does not account for the increase in fractures which fail to unite. This is probably due to two factors:

1. A change in type and nature of fractures, as evidenced by more multiple fractures when several bones are broken, making a greater demand on callous output with defective union in one or more, and more severe trauma to the soft parts, impeding circulation, or by direct injury to the bone impairing osteogenesis. There are also a larger number of compound fractures in which union is always retarded.

2. An evolution in the treatment of fractures to meet the demands of the X Ray, which at times is exacting, often requiring too frequent manipulations in an effort to produce a satisfactory reduction from a radiographic standpoint. Such repeated trauma may impair the natural process of repair. Resort to open operative reduction is too frequently employed, delaying union by mere incision and, in many instances, further damage by trauma to the periosteum and soft parts. Should infection complicate insult to nature is obviously greater.

In reviewing 1555 fractures, from private records, there were only 76 open reductions, which is a higher per cent than should occur in the average run of fractures, as many are brought to the specialist on account of unusual complications.

The etiology in non-union is constitutional and local. The constitutional causes are:

1. Food infection producing a general toxemia and often mild anemia. Infected teeth are possibly the most frequent source.

2. Hypo and hyper-thyroidism. Each condition has been associated in a few instances.

3. Syphilis, malaria, diabetes or any debilitating affection. In no case has active syphilis been a causative agent, though in quite a number there was late or para-syphilis.

The common local causes, in order of importance, are as follows:

1. Improper reduction with wide separation of fragments.

2. Inefficient fixation—an important factor as there has not occurred one non-union in which continued fixation has been routinely employed in 1,555 cases.

3. Interference with circulation by severance of the nutrient artery.

4. Interposition of fascia and soft tissues has not been observed in

a single instance though it is quite possible this cause may not be apparent at the time of operation.

The pathology, symptoms and physical signs are too well known to require narration, except in one type which will be briefly described. Only two such cases have been observed, and both in the lower third of the tibia, with fragments well approximated. After many months or years, following apparent union, the symptoms are pain and slight swelling and limp, after standing or walking, causing material disability. The X Ray shows exuberant callous and apparently solid union. The patient is able to demonstrate feeble motion between fragments, which is elicited with much difficulty by the surgeon. In one case the condition had persisted for three years. At operation there was massive, external callous, somewhat pliable and not organized into dense bone. Between the fragments there was a separation of possibly one-fourth of an inch, which was filled by dense fibro-cartilage with scattered areas of bone. The line of fracture was evidently obscured in radiograms by external or periosteal callous. There was probably a deficiency in endosteal osteogenesis. The discovery of this condition, of which no reference could be found in literature, proves that nonunion occurs in varying degrees and that even should there be sufficient stability to permit normal weight bearing, an ununited fracture may rarely exist. It also accounts for quite a number of cases that have persistent pain, without discernible cause, much longer than should be expected. When these symptoms do not abate after general and local treatment has been persistently administered radical operative procedures alone are indicated.

The radiographic findings are of interest and may demonstrate extensive bone atrophy of both fragments, but are more pronounced in the distal. The fragments may taper to points or cones, form a definite false joint in which the proximal fragment is the receiving cavity, or there may be excessive callous on both fragments which does not seem to have the power to penetrate the line of fracture. Endosteal callous is apparently absent as has been observed at operation and may have a causative relation to non-union.

The treatment is prophylactic, constitutional and local. In every fracture of consequence there should be a complete physical and clinical examination and all defects eliminated by which non-union would often be avoided. In ununited fractures the cause, if obscure and remote, can often be ascertained and removed but usually without the slightest effect on the local condition which is so completely organized that aid from this source cannot be expected, however, chances of success by subsequent treatment is materially enhanced.

Local massage, electricity and active motion is indicated when there are trophic changes in the soft parts, but, as a rule, are a mere waste of time even as preliminary to operation. Such measures, as stimulating

fragments by friction pounding, or the injection of blood or irritants, are too uncertain to be worthy of trial, except in "delayed" union, which is not under discussion.

In order to obtain union in a large per cent there are two important factors which must, at all times, be considered and rigidly observed: first, complete internal fixation, second, osteogenesis, to which the operative measures are more generally employed do not comply. These methods are:

1. Simple paring of the fragments, placing in apposition and applying external fixation are of value in early causes when there is wide separation of fragments.

2. Application of metal plates, as the Lane, may secure perfect internal fixation, but inhibits osteogenesis as demonstrated by radiograms which show callous only on the opposite side of the bone from the steel plate. Subsequent irritation and infection are well known objections.

3. Animal bone plates and pegs are better tolerated but of about the same action as metal—a foreign body which may not be absorbed for many years.

4. The autogenous bone graft—a most indefinite procedure without standardization. When a hysterectomy or an appendectomy has been performed it is well known what has been accomplished, but a "bone-graft" may indicate a thin plate or peg between two surfaces, a mere caricature of an efficient procedure, the description of which is purposely omitted for the sake of brevity.

I have employed the autogenous bone graft by all of the well known methods, with success in a large per cent, but solid internal fixation could rarely, if ever, be attained, which was a constant reminder that if this could be accomplished the percentage of satisfactory results might be increased and union secured in less time with earlier function than had hitherto been obtained. With this in view, and the massive graft as advocated by Henderson, which secures internal fixation, the following technique was evolved: (A preliminary report of which was published in the *American Journal of Surgery*, January, 1923).

Ample incision is made through the skin in order to expose such fragment, when possible, for four inches, routine dissection is made to the seat of fracture, all intervening scar and fibrous tissues is removed, the fragments are pared with chisel or motor saw and each medulla is reamed out until normal marrow tissue is reached. The fragments are rotated until normal relation has been restored. An incision is made through the periosteum of each fragment, for several inches, depending on length and anatomical location. The periosteum is stripped from one-half to three-fourths of an inch from the circumference leaving attached, as much as possible, the soft parts from which circulation is derived. With a chisel "shavings" are removed from the circumference

until there is a continuous flat surface, for three or four inches, when possible, on each fragment. A broad flat massive graft is taken from the tibia, which should be of sufficient length, breadth and dimensions, to secure firm fixation. With a motor saw the graft is split longitudinally through the edge or small diameter into two parts, a strong outer plate consisting of dense bone or cortex, and an inner, the endosteum. A strip of endosteum is placed within the medulla, bridging the seat of the fracture as reduction is made, thus restoring normal marrow tissue rich in osteoblasts. From the outer plate, or as a separate graft, a strip of dense bone is taken, from which six or eight autogenous bone nails are made, of appropriate size. The strong outer plate is held to the flat surface of the bone, passing across the seat of fracture. Three or four drill holes are made through graft and each fragment, into which the autogenous bone nails are driven. A square peg in a round hole secures firm attachment. In addition chronic cat gut sutures are passed about the bone and graft. The remainder of the endosteum is broken into small particles and placed with the "shavings" about the seat of fracture. If the graft is taken from the upper extremity of the tibia, it is often possible to obtain small pieces of spongy bone which are possibly more active in reproduction than dense bone.

With a limited number of femora and humeri a different technique has been used, which consists of cutting a long slot in each fragment, of about one-fourth inch in diameter, into which the dense outer portion of the massive graft is inserted across the line of fracture. After drilling about eight holes, bone nails are driven through the shaft of bone and graft. By these measures stabilization has been so complete that no motion between fragments can be detected—nevertheless external fixation is always applied.

In order to carry out this tedious procedure a team of trained associates is essential, as well as the most rigid instrumental technique. It is not a one man operation. One surgeon, with two associates, prepares the fractures, while the second and one assistant remove the graft and prepare the nails, otherwise too much time would be consumed.

External fixation remains for eight weeks; further observation might materially shorten this period. For six months some form of light brace, commensurate with joint function, is worn as experience has shown that all bone grafts require protection over a long period of time.

Within the past two years we have gradually discarded other procedures and are now employing this method in all cases. Sufficient length of time has elapsed in 17, in which results can be given. All were apparently united on removal of splint or cast, no motion could be detected between fragments; there have been no non-unions. The time required for union has been materially shortened. In one case only five weeks was required. No infections or other complications have

occurred. The distribution was as follows: Femora 3, humerus 7, both bones of the forearm 3, ulna 1, radius 1, jaw 1, tibia 1. The most difficult is both bones of the forearm and the upper third of the femur.

In conclusion desire to emphasize:

1. Reduction of fractures should be accomplished with minimum trauma to the soft parts and without numerous attempts.

2. In open reductions of fresh fracture, which is seldom necessary, care should be taken not to destroy or inhibit natural osteogenetic elements.

3. In operation for ununited fractures as small an area of periosteum as possible should be disconnected from the bone, leaving attached muscles and soft tissues from which nutrition is derived through the blood stream.

4. Internal fixation—Osteogenesis.

The results have been all that could be desired, the time of consolidation materially lessened, and function thereby conserved by earlier active motion. In consequence believe the technique described of material value and worthy of consideration at the present time.

OPEN AND CLOSED REDUCTION OF FRACTURES

By FRED W. BAILEY, B. S., M. D., F. A. C. S., St. Louis, Mo.

Traumatic surgery presents numerous difficulties. The problem of handling a surgical condition in which the operator inflicts the only trauma, differs widely from the care of the lacerated, torn, crushed infected injury to which fracture cases are often subjected. The promptness with which such injuries can be given surgical care determines definitely the period of time loss and the degree of functional recovery.

The problems of the patient and the Doctor may differ, but the mutual desire and effort of both is toward the most rapid return to full time proficiency. It may be asserted without question that the interests of all are best conserved when no permanent injury results and that the expenditure of time in its accomplishment is of minor import. Neglect in early and complete reduction and supervision during the early stages, failure to mobilize and functionate early and hesitancy in applying radical measures when the necessity is inevitable, are all progenitors of permanent disability. There is no place in surgery of any sort for the one who trusts to luck. An over-lapping union, with definite shortening of the limb, is seldom necessary or excusable in this day of modern facilities. I say seldom because preservation of life is the first consideration and the complications which develop may so overshadow the initial injury that we must at times be satisfied with some degree of permanent disability. (It is with a desire to emphasize some of these problems presented in such cases where patience and perserverance must overcome

*Read before the Mississippi Valley Medical Assn., Hot Springs, Ark., October 9-11, 1923.

disappointment, wherein the injured and the surgeon must co-operate in every detail, that normal function may be attained, that this discussion is presented. In this type of cases may be classed those which are seriously complicated, and where the selection of the method of reduction and fixation is the prime consideration.)

One of the most important stages of a fractured limb is the period between the actual injury and the medical attendance. Irreparable damage may result from most earnest and conscientious efforts of the fellow workmen to splint and transport the injured, that the value of at least enough instruction in First Aid that no additional harm will be done should be given careful thought.

Fracture types may be briefly outlined as follows: Simple indirect, simple direct, comminuted, compound, and complicated. Direct fractures are usually complicated by varying degrees of severe laceration or crushing of adjacent soft tissues, which greatly retards the reparative power. Fracture complications are: 1. Haemorrhage. 2. Embolism. 3. Nerve injury. 4. Loss of bone substance—osteomyelitis and osteitis. 5. Infection and the various forms of non-union or mal-union, due to intervening tissues, improper reduction or fixation. It is obviously impossible within the prescribed time for one to present any discussion of the various types or complications, yet it is imperative that we remind ourselves that most of the complications met with may be prevented by well directed First Aid premedical treatment and by prompt reduction, perfect fixation and courageous radical surgery when justified.

This is not an attempt to determine the comparative value of two surgical methods. The closed method is emphatically the one of choice when applicable and effective. The only debatable query is "when are we justified in resorting to an open reduction or internal fixation?" Popularity contests are frequent in surgical literature. Cholecystectomy vs. cholecystotomy, pyloroplasty vs. gastroenterostomy, the bone plate vs. bone graft in open fracture are often compared as to their respective merits, but the discussion is somewhat ambiguous in that circumstances and indications so often vary.

A broken bone is a signal for prompt action. Immediate reduction, when not contra-indicated, is desirable. The Bonesetter of pre X-Ray days did not await the disappearance of swelling or hesitate for fear of infection or embolism. Modern extension methods were not available and were seldom necessary, for as soon as he could reach the patient the reduction was attempted. He secured complete relaxation by profound anaesthesia and with hands that were trained to see as well as feel, and possibly a better knowledge of the muscle pull than we now possess, obtained good functional results in most cases. None would want to revert to the days of limited facilities, but it is to be regretted that we

have permitted modern methods and the X-Ray to encourage us to laxity in the recognition of certain clinical signs that could still serve and guide us well. We could well afford to revive some of the simple principles that have been relegated by the advance of medical science, and the advent of the Roentgen Ray.

I can say with regret, but truthfully, that in my experience the disappointing results I have experienced have been due largely to delay in reduction, non-observance of muscle pull in post-reduction position, and to over-reliance on the fluoroscope to overcome early neglect.

The reduction of a closed fracture may be divided into three stages:

1. Complete relaxation—by deep anaesthesia.
2. Gentle manipulation into apposition, with the least possible additional trauma.
3. Fixation of the limb in the anatomical position which offers most complete physiological rest.

If this can be carried out in the first twenty-four hours open reduction would seldom be needed; the pain, swelling and muscle-tension which follows an expectantly treated closed fracture hourly increases the danger of soft tissue intervention, and lessens the hope for a satisfactory closed reduction.

When X-Ray facilities are at hand the second stage of the closed reduction is simplified. Reduction under anaesthesia and the fluoroscope with immediate application of a non-constricting fixation splint insures less trauma, a more rapid balance of circulation, diminished swelling and prompt healing.

The factors that encourage delayed or non-union, fibrous union and malposition and which force us to resort to open reduction, as outlined above, are largely preventable, yet not always so. It requires a liberal amount of surgical sense to enable one to select the cases which because of their particular pathology invite early open reduction.

The osteogenetic activity of a broken bone diminishes as the period of non-contact increases. If to this be added the usual amount of trauma and laceration which follows imperfect fixation, or the interposition of soft tissues, preventing bony contact, union may seldom be hoped for without serious delay. A sound functioning limb is the goal to be achieved. Failure to secure this by closed methods may mean, at worst, a flail limb, fibrous or mal-union; failure by open method may seriously endanger life, and should be attempted only by those trained and accustomed to such work. Assuming that talent is available, and that under complete relaxation two or three attempts to reduce and maintain a fracture are unsuccessful, when a properly applied extension pull fails to show encouraging progress, or the pathology present makes it apparent to the skilled, experienced observer that resort to the open method is

inevitable, operation should not be delayed beyond the time necessary for preparation. The pathology present in each individual case must therefore guide in the selection of the method, and not a preponderance of adverse opinion, nor the comparative attending dangers. Open reduction performed under most rigid antisepsis and maintained by external splint only will be applicable in a limited number of simple and compound fractures of a certain type, particularly compound fractures, where immediate antisepsis is indicated. Early return to partial function, with some type of ambulatory splint, is highly desirable. The path to restored function is not always bordered with flowers and unfortunately the attempt may sometimes result disastrously. We should, therefore, advise and carry out the method which assures a functional cure and the one which we, as surgeons, would desire applied to ourselves in like circumstances.

No bone graft cases have been reported in this series. I have instead shown slides from cases which because of their unusual complications were adapted, in my judgment, to bone plate fixation, together with a few open and closed reduction cases for comparison. It may not be improper to interject here a few words about the metal plate. If properly applied in recent fractures, when external methods fail to fix, the osteogenetic process active, properly supported by external fixation splint so that no strain rests on the plate or screws, and removed under local anaesthesia as soon as the X-Ray shows sufficient callous, relying always upon the external splint, it is not an unacceptable method of handling non-reducible or non-united fractures. In long standing mal-union, with bone absorption and organized intervening tissue, autogenous bone graft, or medullary peg, is the method most likely to secure final union. Criticism of the bone plate is justified largely because of lack of judgment in selecting cases suited to its use; to faulty technique in applying it, imperfect external fixation, thereby permitting undue strain on the plate or screws; failure to remove the foreign body, if a metal plate is used, when the broken ends are welded by callous, and to maintain external support until ossification is complete. It is unfair therefore to condemn a method in which untoward result are largely due to error in selection and application. It is equally unwise to fail to recognize the limitations of any and all methods of internal fixation to the neglect of closed or simple open reduction when the latter offers a fair prospect of success. The treatment of Fractures commands the respect of the careful Surgeon and should not be intrusted to the Internes. Daily inspection and readjustment, faultless surgical technique in open treatment, and untiring patience and perseverance, with the courage to apply radical treatment when clearly indicated, will insure maximum success in this interesting division of Surgery.

DISCUSSION

DR. F. F. LAWRENCE, Columbus, Ohio: I can but feel that if we had no other papers presented at this meeting, the time and expense in attending the meeting would be amply justified after listening to these two excellent papers.

I wish to emphasize a few of the points which, it seems to me, were not as sharply defined by the authors as they might have been, one of which I watched carefully and if the authors mentioned it I failed to catch it, and that is the condition that occurs generally as an ischemic paralysis, frequently caused not by pressure or obstruction to the circulation, or by pressure on the nerves, but because of the damage done by severance of the nerve at the time of the fracture by one portion of the fractured bone, including the nerve or a portion of the nerve between the ends of the fracture and its embodiment in the callus. Those are two things which occur very frequently. There is injury or severance of the nerve resulting in atrophy of muscles below the point of severance. I have seen this a number of times. In the past two or three years I recall two cases in which serious malpractice suits resulted because of so-called ischemic paralysis. They were not cases of ischemic paralysis at all but were due to nerve injury. Operative treatment as a final step resulted in the proper suturing and preventing not only failure of function to the patient but saving an unpleasant and outrageous malpractice suit as it was in this case.

I would like to ask, what are the objections to the operative treatment, suturing or plating, or using a bone graft, I care not how. There can be but two. The first is practically of no moment because it will not occur in the hands of a man with proper technic of this procedure. In connection with compound fractures you have the parts ground full of all kinds of filth and dirt, and how many of these cases are followed by an osteomyelitis? I have had an experience of thirty-eight years and have yet to see the first case. I doubt if it occurs from foci of infection in our fracture cases because bone does not readily become infected. The soft parts become infected, but clear up with drainage without the involvement of the bone. Comparatively few of our fractures are followed with necrosis. The great danger in compound fractures is the possibility of tetanus. If we keep in mind the simple fact that oxygen is an absolute enemy to the tetanus bacillus and flush our compound fracture wounds with peroxid of hydrogen, we can forget about tetanus if we do not have the tetanus serum to fall back on.

In these cases we have to contend with three things, malunion, nonunion and painful union, with the inclusion of a nerve or portion of a nerve. Nonunion and malunion occur because of improper position of the fragments. Nonunion may be due to incomplete apposition, but more frequently it is due to the interposition of fascia or muscle between the fractured ends. This is obviated by the operative treatment because you cannot make a perfect adjustment and be sure of the result in oblique fractures; you cannot be sure by any method of treatment you have not interposition of fascia or muscle between the ends except by the operative treatment, suturing, wiring, or plating.

So far as the Lane plate is concerned, I have used it ever since Lane advised and advocated it. I happened to be in his clinic in the early days when he was using the plate, and in my experience I have never yet seen one of them cause the slightest trouble. I used the Lane plate in one case several years ago in the humerus, and in one case in the tibia. After a while, the argument is advanced that the plate becomes a foreign body in the tissues. In the great majority of cases heavy kangaroo tendon or silver wire can be used with as much effect as the Lane plate.

DR. WILLIAM T. COUGHLIN, St. Louis, Missouri: I wish to confine my remarks to the operative treatment of fractures. I am sure that my colleague, Dr. Bailey, did not want to convey the impression that he advocates operation in all cases of compound fractures. Dr. Bailey would not operate on a case of compound fracture if he could reduce it without operating. I do not believe he would be inclined to do any operation on a fracture that is compound due to the projection of the end of a bone through the skin. A compound fracture that has a lot of dirt ground into it, contrary to the opinion of the last speaker, I think is really a dangerous sort of thing, and I have seen people die as a consequence of compound fractures, and I know I have seen them die when everybody tries to operate on them. I have not seen bad results if the men who were operating on these fractures brought to the operation everything that they should. Certainly, there are only a small proportion of surgeons who are fully competent to do this kind of work. If operation is advocated generally in this class of cases there will be a lot of unnecessary deaths.

Fat embolism was mentioned. There is not anything I think that one is so helpless in the face of as that. The diagnosis is made postmortem quite often. I remember distinctly one case where the part was immobilized at once and the patient came in with a well applied splint. He never struggled at all when brought in, nor afterward. He seemed perfectly rational—having been in the hospital for two days he went to sleep and could not be aroused. The case terminated in death with all signs of trauma to the upper end of the cord or medulla, and on post-mortem examination grossly there was nothing evident. The fracture seemed all right and the organs were all right, but microscopic examination of the spinal cord and brain revealed the presence of fat in the capillaries, and this can be shown today as the specimens are in the possession of the Pathologic Department of the St. Louis University.

With reference to ununited fractures, I think we have a lot of different ideas about them as the doctor says. When I speak of ununited fracture I refer to a fracture that has not united after all proper measures have been instituted to make it unite, namely, proper reduction and proper fixation. The doctor has stated that nonunion of the neck of the femur is the same as nonunion anywhere else. I believe that is true. I believe proper reduction of a fracture of the neck of the femur is more difficult than any other fracture, but there are cases where apposition is perfect. For instance, in fractures of the tibia and humeri, and also in fractures of the neck of the femur, where the parts have been apposed for six or eight weeks and have failed to unite, but being stimulated they have united and have again separated. Those are cases due to some inherent disturbance with the patients' metabolism. A multiple fracture is a good example. I am glad the essayist referred to that. There is a lack of calcium salts deposited. Some patients have not enough calcium salts deposited to bring about union. It takes more lime for many fractures than it would for only one.

With regard to the operation for ununited fracture, this is the first time that I have had my attention called to the use of a very large graft. It has been my feeling that we have been using too much bone instead of too little, and I have been trying to get away as far as possible from the use of larger pieces of bone. However, Dr. Campbell has shown us that his results are perfect, but it is rather a formidable undertaking to insert a piece of bone nine inches long or so in the forearm or thigh. It makes the operation much more serious. If one can get along with less it is not well to undertake such a procedure. The French originally brought out the bone shaving or a form of bone graft to use where they wanted to stimulate osteogenesis, but when I have been called upon to bone graft in most cases there has

been loss of bony substance to overcome, and in those cases where the bone has been large I have not yet resorted to the bone shaving. I believe I shall. I have been so encouraged with the bone shaving, (the osteoperiosteal graft of the French) in small bones where nonunion has occurred, and where loss of substance has occurred, that I shall try it on larger bones when confronted with my next case.

I believe that the Lane plate has an influence in any kind of fracture; I believe it has an influence in delaying union. I have used it a good deal and shall use it again, because I do not believe there is anything that can take its place when we want some internal fixation splint, as in a fracture of the femur.

When it is the opinion of the surgeon that operation is indicated in these cases, I believe it should be done as soon as possible. I believe when nonunion has occurred or failure of union after the course of two or three months, where proper means have been taken to stimulate bone formation, operation should be undertaken and we should quickly resort to the implantation of some kind of stimulation, and I do not believe there is anything better than bone chips or the osteo-periosteal graft.

DR. JOHN DEJ. PEMBERTON, Rochester, Minnesota: I would like to ask Dr. Bailey, how he makes a clinical diagnosis of fat embolism.

DR. BAILEY (closing on his part): Chiefly from close personal observation of the case and the opinion of our assistants and attending internists who have observed the symptoms, attacks of sharp pain in the chest, slight dyspnea, repeated at intervals, all symptoms disappearing in a few hours, occurring in fat people, following trauma. Fracture of long bones, etc., are typical of fat embolism. There were no indications of any large emboli presenting themselves. We had it occur following fracture with severe traumatism in two obese patients, repeated when manipulating the fracture for correction of deformity. These symptoms were repeatedly observed over a period of several days.

I wish to assure my distinguished associate, Dr. Coughlin, that I mentioned three or four times in my paper that I never resort to open reduction or internal fixation or any operative procedure when I can accomplish reduction and fixation without it, but if I am not able to do it after faithful attempt, I never hesitate to resort to open reduction and coaptation of the fragments.

DR. CAMPBELL (closing): I fully realize that nonunion may occur when there is coaptation, though in our series of 1555 simple fractures there were no ununited fractures. No fracture showing mobility between fragments should be considered ununited as early as three months, but merely "delayed union" which will usually respond to conservative treatment. At least six months should elapse before radical measures are instituted.

The inlay and intramedullary grafts have been commonly used for years. Recently the osteo-periosteal flap had been advocated by Delangeniere, from whose reports one might conclude that his cases were largely infected gun shot war wounds, which often united without treatment, as has been frequently observed while waiting for such wounds to heal before grafting. In one soldier there was loss of bone substance with non-union and mild infection, for two years, which resulted in solid bony union and excellent function by natural methods alone.

I did not intend to convey the idea that any ununited fracture of the forearm would require a graft of nine inches, but it should be of sufficient size and dimensions as to secure absolute fixation in all locations.

I am convinced after employing all methods for a number of years, and transplants of varying type and size, that complete fixation and osteogenesis will give the largest per cent of successful results as evidenced by seventeen consecutive cases without a single failure.

FROM PARENT TO OFFSPRING

By CASPER L. REDFIELD, Chicago

In his "Senescence and Rejuvenescence", Child tells us (page 369) that plants raised from cuttings taken from a plant which is ready to bloom, will flower earlier than will plants coming from cuttings taken at other times. This is an illustration of the fact that in a living thing, the entire organism operates as a unit toward a given objective. A billion cells in one organism differ from a billion unicellular organisms very much as an army differs from a mob. The mere fact that a cutting is temporarily diverted to the production of roots, or an army is diverted to overcoming some obstacle, does not prevent either organism from going on to the intended objective as soon as possible.

In his experiments on the bacteria of fowl cholera, Pasteur found that a culture which had been kept for several weeks on artificial food lost its virulence, and virulence is nothing else than power of attack. In the blood of a fowl, these bacilli must fight a hostile blood reaction, and the physical efforts of fighting keep their powers (virulence) well developed. But when these bacilli were stalled on artificial food they did not have to exercise their powers of resisting a hostile blood reaction, with the result that their powers gradually declined. Pasteur next found that spores derived from weakened bacilli produce other bacilli of the same virulence as those from which the spores came. (Burnet: "Microbes and Toxins", page 119). A spore is an asexual egg, and, as far as heredity is concerned, an asexual egg does not differ from a sexual egg. This experiment shows that the powers existing in the parent at the time of reproduction are the powers which are inherited by the offspring.

The chameleon has the power of changing its color at will, and usually changes it to match the background upon which he is. If he is placed on a piece of white cloth, he will change from his previous color to white. If moved to black, he will change to black; if moved to green he will change to green; and so on. These changes are made by muscular movements of pigmented cells in the skin, and are not instantaneous. A few seconds are occupied in making a change. If we could slow down that rate of change so that it would take several years to change from one color to another, and we should breed the animal while it was in the process of making a change, would the offspring be born in an intermediate condition between one color and the other?

The black and yellow salamander of Europe has this power of changing its color, but has it in a very feeble condition. It can accomplish less in years than the chameleon can in seconds, but it has the power of change. Kammerer put some of these salamanders on a yellow background and soon found them growing yellow at the expense of black. After keeping them

on yellow ground for about six years, he bred them, and found that the offspring were more yellow than wild young ones of the same age. These offspring were kept on yellow ground for about three years and then bred, and the offspring from this second breeding were still more yellow. Other experiments were made by keeping some animals on black, and by shifting animals from one color to another, but all showed that the offspring inherited what existed in the parents at the time of reproducing.

The horse Almont was a famous sire of the trotting breed. He did a good deal of trotting work and not much breeding during the first ten years of his life. He lived twenty years, and during the second ten years he did much breeding and no trotting work. When a horse is doing trotting work, his trotting powers develop. When he is not doing trotting work, his trotting powers gradually decline. The sons of Almont were used much as sires of trotters, and when we examine the performers among the grandchildren of Almont, we find that he was best as a progenitor at the end of his trotting work and at the beginning of his sedentary life. The offspring he got in early and late life were relatively much inferior. These facts show that Almont's dynamic development, as it existed at the time he was bred, can be traced through two generations to his grandchildren.

Belmont was another famous sire of the same period. Like Almont, the first half of his life was work and the last half was luxury in the breeding ranks. The sons of his which overshadowed all others as sires of performers were got within two years, the center point of which was the change from activity to idleness.

Happy Medium, Dictator, Volunteer and Harold were other of the principal sires of the trotting breed living at the same time. Each one of these horses had hard work during the early part of life, and ease and idleness during the later part. And in each case, these horses got their best progeny at the times when they were at their highest physical development by exercise. Going either direction from the change from exercise to idleness, the offspring were poorer and poorer the further they were from these central points.

Shakespeare divided the life of man into seven ages. In a similar way I divided the reproductive period in the life of man into four ages,—under thirty-one years of age, from thirty-one to forty, from forty-one to fifty, and over fifty. As a general proposition, the man between twenty and thirty is energetic, aggressive, ambitious, conceited and dictatorial. If given power, he would rule the world with a club.

The same man between thirty and forty is in the artistic stage of life. It may be music, poetry, literature, painting or sculpture, but he is a lover of the beautiful. As the man passes on to the stage from forty to fifty, he pays less attention to the ornamental and more to the practical. He looks at the dollars and cents, the useful, and the proper management of governments, both national and local. Going beyond fifty, our typical man be-

comes philosophical and moral. He is looking at the welfare of the race rather than the welfare of the individual.

The ideal man thus set forth is an all-around individual of more than average ability, and not the eminent specialist. A man usually becomes eminent because he gets intensely interested at a fairly early age in some particular thing, and gives it about all of his time which is not necessarily consumed in sleep. If a man of considerable native ability is so interested in some one pursuit that he gives it about sixteen hours a day for many years, he is pretty likely to become prominent if not eminent in that line. But the man most likely to give so much effort to one thing is the man who has inherited a disposition in that direction.

We have had in this world a number of ambitions and aggressive military commanders like Alexander, Charlemagne, Frederick the Great and Napoleon. The most spectacular of these were sons of men less than thirty years of age when those sons were born,—sons of men in the ambitious and aggressive stage of life. We have had eminent military commanders who were sons of older men, but I am now speaking of the ambitious and aggressive type of mind, and not necessarily of men of the greatest mental capacity.

If we take musicians like Bach and Beethoven, Mozart and Mendelssohn; poets like Goethe, Schiller and Shakespeare; artists like Michael Angelo, Raphael and Rembrandt; and men distinguished in literature, as Carlyle, Goldsmith and Macauley, we find the most eminent of them to have been sons of men in the artistic stage of life.

In a similar manner we find the practical and constructive statesmen like Bismarck, Cromwell, Gladstone and Peter the Great to have been principally sons of men in the practical stage of life between forty and fifty. And the philosophers like Aristotle, Bacon, Buddha, Confucius, Ben Franklin, Leibnitz and Seneca we find to be principally the sons of men in the philosophic stage of life, men over fifty years of age.

Not only do we find the greatest of men classified in this way, but when we come down to something less than the most eminent, we find the greatest number of persons classified in the same way. In my investigations into the ancestries of eminent men I found 236 of them whom I could classify under one or another of these heads. The result is shown in the following table.

Mental Aptitudes of 236 Great Men					
Type	Military	Artistic	Practical	Philosophic	Totals
Type	Fathers under 31	31-40	41-50	51+	
Military	16	8	4	3	31
Artistic	11	36	25	9	81
Practical	6	27	33	10	76
Philosophic	5	7	15	21	48
	—	—	—	—	—
Totals	38	78	77	43	236

Here we see that the greatest number of eminent military commanders come from fathers in the aggressive (military) stage of life, with the numbers decreasing for the older parents. At the other extreme we see the greatest number of philosophers coming from fathers in the philosophic stage of life. One of the three military men indicated in the table as being sons of men of more than 51 years of age is General Robert E. Lee. But there is nothing of the Alexander and Napoleon type of mind about Lee. He gets into the military classification simply because of his fame as an able military commander and not because of military aggression. And one of the five philosophic men born to fathers less than 31 years of age is Mohammed. But there is nothing of the mild mannered philosopher, like Buddha and Confucius, about Mohammed. He was a reformer of the sword.

In all of these examples we are dealing with some qualities or characteristics of the living individual, and not anything belonging to or manifested in a dead one. In giving a definition of biology and the biological sciences, the encyclopedia says that "the properties of living matter distinguish it absolutely from all other kinds of things." It follows from this that we have been considering biological characters and biological inheritance. In some of these examples we can distinguish biological characters being biologically acquired. Such is the case of the bacillus of fowl cholera. A greater or less degree of power in a living organism is the result of a greater or less degree of "the activity peculiar to protoplasm", and the decrease of virulence which Pasteur found may be considered as negative acquirement. His direct experiments showed that the acquired biological change was biologically inherited.

In the trotting horse we have the common knowledge that trotting powers are acquired by trotting exercise, and lost by failure to exercise. The extent to which trotting powers may be acquired by trotting exercise is much more than is ordinarily supposed. It is not limited to full growth, but, under continued exercise, will continue up to the last years of a horse's life. And this acquirement may, and frequently does, extend to something far beyond any possible inheritance. It is always so in every case of a champion trotter.

The trotting power thus acquired is a biological character because it is characteristic of living matter and not of some non-living thing. Also, the process of acquiring trotting power is a biological process because exercise is an "activity peculiar to protoplasm." The evidence from the horses shows that biological characters biologically acquired in the somatoplasm are biologically inherited. The examples frequently cited to show the contrary are not biological characters at all. They show no more than that some non-biological thing cannot be biologically inherited.

1542 Monadnock Block.

FRANCONIA NOTCH, NEW HAMPSHIRE

By CHARLES J. DRUECK, M. D., Chicago

New Hampshire, aptly named "The Granite State," has the distinction of enclosing within its borders the famous White Mountains, visited by untold thousands for more than a century past. These mountains consist of several parallel ranges whose crowning peak is Mt. Washington (6,200 feet), intersected by deep gorges which are known in New England nomenclature as "notches."

As we reached the Franconia Notch we found ourselves fairly amid towering cliffs. Perhaps no feature of the White Mountains regions has contributed so much to the making it known in every part of the country as the section known as Franconia Notch. The road runs along the east shore of Profile Lake, and on the west shore is Mount Cannon whose southerly face presents the curious rock formation upon its brow known as "The Old Man of the Mountains." This naturally cut profile gives name



Fig. 1.—The Old Man of the Mountain

to the immediate locality and to the mountain too, and has become celebrated wherever the histories or accounts of travel are found. This great stone face is 85 feet high and is elevated 1,250 feet above the road.

Of all the natural curiosities in the White Mountains, the "Old Man" is the best known. Long before the art of photographic reproduction was used to send the stern visage to all parts of the world, its fame was known through legend and song and story.

Whether or not the "Old Man" was known to the Indians cannot be determined with certainty. The tradition that it was worshipped by them is doubtful, as they appear to have left no legend concerning it. Beyond

a doubt they must have seen it, but evidently were not impressed enough to weave about it a story that has come down to us.

The question as to the first white man to look upon its features is also debatable. Sweetser, an authority upon White Mountain lore, gives the credit to Francis Whitcomb and Luke Brooks, who were working on the roadway through the Notch in 1805. While going down to the Lake, then called Ferrin's Pond, to wash their hands, they looked up and saw the Profile. They remarked it looked like Thomas Jefferson, who was then President.

The late Mr. W. C. Prime, who spent much of the summer time at his beautiful Lonesome Lake fishing lodge, and can be equally relied upon as an authority, gives a different version of the finding. He bestows the honor upon a clergyman from Lisbon, who had driven out to see the men working upon the roadway.

The existence of the Profile was first made known to the world by General Martin Field, who sent a short description of it to the *American Journal of Science and Arts*. It was published in July, 1828. Later on Hawthorne immortalized the Profile in his beautiful allegorical tale, "The Great Stone Face." A book by Edward Roth, "Christus Judex," is probably the best story ever written about the Profile.

Contrary to the general impression of the countless tourists who look at The Profile, it is not a hewn face. The Profile is formed by the accidental position of several rocky ledges that at a certain angle, take on the appearance of a face. A hundred feet in either direction, from the spot where the face can be seen, reveals only a rocky crag.

The best place to view "The Old Man" is from the porch of the little shop that stands by the roadway. It is here the angle gives the best impression of the Profile. It can be seen at the lakeside where in all probabilities it was first viewed by some traveler who came down to water his horse and refresh himself at the waters of Profile Lake.

Each part of the day gives a fresh expression to the Profile. In the early hours of the morning he may be seen reflected in the still waters. As the sun comes up over Lafayette his face lights up with the new morning, but as the sun sinks down over the side of Mount Cannon a sad wistfulness comes over this age-old visage as if he dreams of the better days that are to come.

This spot has been nationally famous for nearly a century. There is no other section of the White Mountains where the visitor is domesticated amid the most savage and startling scenery, in which cliffs and forests combine; and yet there is beauty enough intermixed with the sublimity and wildness to make scenery permanently attractive, as well as grand and exciting. The entire Franconia Notch is included in this magnificent preserve of six thousand acres, extending nine miles through the mountains, known as Greenleaf Park.

The land has been maintained in its natural state of wild and rugged beauty and has been recently given the name of the former President of the Profile Company, Colonel Charles H. Greenleaf, a pioneer in the development and exploitation of the natural beauties of the White Hills of New Hampshire.

The traveler coming from the southern road will first reach The Flume. A road is maintained from the entrance on the main highway to the Flume Rest, from which point a substantial board walk enables the visitor to make the trip through The Flume proper up to the Cascade and Bear Cave, with comfort. The Flume is a great cleft in the solid rock, extending for several hundred feet, with perpendicular walls rising to a height of sixty feet, through which a stream passes in a channel ten to twenty feet broad. The Flume Motor Stage makes a trip every ten minutes from the entrance on the highway to the Flume Rest, a distance of one-half mile.

The entrance to The Pool lies about one hundred feet north of that to the Flume, and a well kept path leads to this immense natural well, deep in the virgin forest, two hundred feet broad, and with walls nearly as high, holding forty feet of crystal water. The stream from the Pool unites with that from the Flume just below the covered bridge at the Flume Rest, and makes its way thence to join the waters of the Pemigewasset River.

The Basin lies beside the main highway. A smooth circular bowl of solid granite is filled with water as pellucid as air, and fed from a perpetual cascade. In The Basin is found the Old Man's Foot. The best view of The Basin and the Twin Falls above it will be enjoyed from the observation bridge over the stream.

Leaving the Profile we journeyed to Sugar Hill, somewhat off of our road but alluring because it had an atmosphere quite its own, a resting place with the latchstring out where without ostentation we found a home-like comfort. Here we found a singular combination of old fashioned furniture and wood fires in the grates bringing the cheer of a large country house and then the added appointments of electric lights, private baths and long distance telephone.

Having now spent a few days and much money at the larger hotels in the mountains we left the beaten path and on a back road found a most enchanting place in its wonderful simplicity. Here we stopped a few days to appreciate the unlimited beauties about us.

We now headed our motor along a narrow road through wild country shaded most of the way by the overhanging pines and birches at Bretton Woods. The peculiarities of the country lend themselves to hiking in both summer and winter and we longed for the bracing exhilaration of mind and body derived from a snowshoe tramp over these hills in the ice and snow and cold dry air of the winter.

BETHLEHEM AND FRANCONIA

No vacation and health resort in the United States has earned a wider renown than has Bethlehem, and certainly there are few places more superbly endowed with scenic charms and all the other attractions that go to make up the ideal tourist center.

Bethlehem, the highest of New England villages (it has an altitude of 1,470 feet), has been variously described as a "rambling old township extending irregularly in unexpected directions," and as "consisting mainly of one broad street, extending for a mile or more east and west on the high open view of the Ammonoosuc Valley."

Bethlehem's summer population is to be enumerated in the thousands, a large number of its habitués being sufferers from hay fever, and this



Fig. 2.—Hiking among the bracing fragrance of the firs

means that it contains the largest number of hotels and boarding houses of any summer center in the mountains. The "court" end of the town is Maplewood, a mile or so east of the center, having its own post-office, its own telegraphic connections with the outside world, its own railroad station, and its own social life.

Situated about equal distance from Bethlehem, Littleton and the Profile House, just east of Sugar Hill, lies the romantic village of Franconia, giving name to the famous notch of which it stands the sentinel.

From the higher elevations of the place magnificent panoramas of surrounding mountain and valley scenery unfold.

Franconia is one of the most convenient places in the hill country from which to reach a variety of points of interest. The drives and walks are especially charming and the adjacent river can usually be depended upon to furnish a good fare of trout.

THE ROCKEFELLER FOUNDATION

By GEORGE E. VINCENT, President

[This installment of President Vincent's Review of the activities of The Rockefeller Foundation during 1923 traces the progress of the campaign against yellow fever, with special reference to the present efforts of Brazil to rid herself finally of this dread disease; comments on some of the problems of malaria, hookworm disease and rural sanitation; and outlines the Foundation's program in medical education.]

Brazil's Final Bout with Yellow Fever

"The outstanding feature during 1923 of the systematic, concerted attack upon yellow fever in which the International Health Board of the Rockefeller Foundation has been engaged since 1916 was the decision of the Brazilian Government to undertake a definite campaign to eliminate the disease from the seed beds along the northern coast from Pará to Bahia, where fever still appears from time to time. The Board warmly welcomed the invitation of the Brazilian authorities to have a part in this work. Noguchi of the Rockefeller Institute for Medical Research, the discoverer of the yellow fever organism, sailed for Brazil in November to make further studies and was soon followed by the staff members with equipment and supplies.

"This latest, and it is to be hoped final, bout with yellow fever in Brazil recalls the brilliant way in which the capital was freed from yellow fever under the leadership of that distinguished scientist and able administrator, Oswaldo Cruz. Graduated from the University of Rio de Janeiro, for four years a student and investigator at the Pasteur Institute in Paris, himself a bacteriologist of distinction, intelligent, resourceful, of compelling personality, an undaunted leader, he overcame all obstacles and opposition and made Rio de Janeiro as safe as it is beautiful.

"Oswaldo Cruz had watched with eager interest the progress of yellow fever control. Finlay's early (1881) suggestion that the disease is spread by a mosquito, Ross' discovery (1897) that malaria is transmitted in this way, the indisputable proof by the United States Army Commission under Reed in Cuba (1900-1901) that the fever is communicated solely by the bite of the female *Stegomyia* mosquito, the success of Gorgas in wiping out yellow fever by mosquito control in Havana, in Cuba, and in the Panama Canal Zone, convinced the young Brazilian that the same methods could be successfully applied in his own city of Rio. Appointed Director of Public Health and loyally supported by President Alves, he gradually overcame traditional prejudices, professional opposition, the persistence of antiquated methods, and apprehensive interests of many kinds, until the annual deaths from yellow fever had fallen from 984 in 1902 to 0 in 1909.

"Oswaldo Cruz's death in 1917 prevented him from following as he would have done with so much satisfaction the later success of the cam-

paigns organized by the International Health Board; the formation of national yellow fever commissions in Mexico, Central America, and in northern South America; Noguchi's discovery of the causative organism and his preparation of a vaccine and a serum; the clearing up (1918-1919) of Guayaquil in Ecuador, the chief endemic center; the exploratory expedition (1920) to the West Coast of Africa to investigate cases reported there; the elimination of the fever from Peru (1921); the quick control of incipient epidemics in Central America; and the active participation of the Mexican Government in the movement until by 1923 it was possible to make a most encouraging report. The situation in 1923 may be summarized as follows: No cases reported from Mexico, Central America, Ecuador, or Peru; outbreak in Colombia promptly put under observation; well-organized control measures under way in Northern Brazil and workers in training to resume study and observation along the coasts of West Africa from which cases of yellow fever have been reported."

Studying the Behavior of Malaria Mosquitoes

"Control of malaria is not always so simple as a statement of the essential facts would make it seem. . . . Variations in local conditions of mosquito breeding, in climate, in the character and distribution of populations, in occupations, in the nature of dwellings, in the presence of domestic animals, and in other factors create rather complicated problems which call for a combination of measures peculiarly adapted to each situation.

"The International Health Board has been engaged in malaria control work since 1916. Special attention has been given to small towns and rural areas. . . . During 1923 special malaria investigations were carried on in the United States, Brazil, Nicaragua, Palestine, the Philippine Islands, Salvador, and Porto Rico. In connection with control measures in many parts of the United States incidental observations of importance were also made.

"The Board continued to participate in demonstrations of malaria control in which local governments, state boards of health, and the United States Public Health Service shared. In 1923, the program included 66 county-wide projects and 82 towns demonstrations in 12 states. These demonstrations offered additional proof that under ordinary conditions many communities can reduce malaria to an almost negligible point, at per capita costs which are within the limits of local taxation."

Rural Health and Happiness

During 1923 the Board carried on hookworm work in Jamaica, Leeward Islands, Saint Lucia, Trinidad, Porto Rico, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, Salvador, Colombia, Dutch Guiana, Brazil, Australia, Fiji, Siam, Ceylon, India and Mauritius. An invitation to co-operate with the Government of Mexico was accepted.

"Hookworm disease and to a considerable extent malaria and typhoid

fever are rural problems. Attempts to control these maladies have disclosed seriously backward health conditions in the American countryside. Typhoid is too often spread by flies, polluted wells, insanitary dairies, and undiscovered 'carriers.' Other communicable diseases are disseminated through the schools. The sanitation of farmhouses and premises is defective. Examinations of rural school children frequently reveal more uncorrected physical defects than are found among town and city pupils. Maternity care and infant hygiene are sadly neglected. Popular knowledge about community health and about personal hygiene, i. e., food, ventilation and exercise, is meager and misleading. While the general death-rate for the United States has steadily fallen, the decline has been relatively greater for urban than for rural populations. This state of things is not due to causes inherent in rural life but to failure to extend to the open country the kind of sanitary and health services which have been developed in towns and cities.

"The International Health Board has from the beginning of its work had as one aim the merging of specific hookworm measures into general health organizations with the county as the unit. This object was realized first in the South. Later the system spread to other parts of the country until in 1923 230 counties in 28 states maintained full-time health staffs. Toward the budgets of 173 of these counties the Board contributed. Such aid was in no sense designed permanently to take the place of public funds, but merely to help state and local authorities to prove to communities the value, feasibility, and eventual economy of modern public health work. Similar aid was given for a limited number of rural units in New Brunswick (Canada), Brazil and Czechoslovakia.

"The average county health program includes: inoculation against typhoid, smallpox and diphtheria; building of sanitary, flyproof latrines; medical inspection of school children, with dental and tonsil clinics; maternity care and infant welfare; control of communicable diseases generally, including special attention to tuberculosis; and education of the community in public and personal hygiene. The typical full-time staff comprises a health officer, a sanitary inspector, one or more visiting nurses, and an office clerk. Motor transportation is provided. The average total annual cost of such a health service in the counties with which the Board is co-operating is \$10,000."

The Doctor and Public Health

"There are certain small nations which have low death-rates, although there seems to be little done in the way of public health work as such. The low mortality is credited in part to favorable conditions of climate, food and outdoor life, but it is said to be largely due to the influence of a well-trained and efficient medical profession which has the confidence of a public intelligent enough to choose and trust expert guidance. Hence sanitation, quarantine, inoculation and hygienic living become a part of daily routine

and are fixed in the official machinery, social customs and personal habits of the people. In all this the physicians, esteemed and trusted, play a leading part.

"In all lands doctors are an essential part of the public health movement. They report births, causes of death, and cases of communicable disease. Upon them depends the introduction of new resources of diagnosis and treatment; for good or ill they educate their patients; they influence public opinion for or against preventive policies. No health service can prosper permanently unless it can command the loyal support of competent local practicing physicians. The presence of physicians, poorly trained or with no interest in preventive medicine, or of representatives of various occult, empirical, or fraudulent cults is a serious handicap to sane and effective sanitation and hygiene in a city, town or countryside.

"It follows that medical education plays an essential part in the leadership and success of public health work. The Rockefeller Foundation is concerned, therefore, in aiding influential medical schools in many parts of the world to improve their facilities, to strengthen their teaching staffs, to perfect their methods, to maintain high standards, and gradually, in the words of a distinguished British medical authority, to 'permeate the curriculum with the preventive idea.' With respect to the last suggestion the International Health Board is supporting in a leading American medical school a plan which aims at getting every teacher to emphasize the preventive and community aspects of every topic with which he deals in his regular courses."

Medical Education Around the World

"During 1923 the Division of Medical Education continued to gather facts about the medical schools, numbering approximately 450, which are to be found in 74 countries of the world. Much of the material was secured by post, but a good deal was brought home by representatives who personally visited schools in nineteen countries. The data collected have to do with buildings, equipment, curriculum, staff, annual budget, and other significant points.

"The returns so far received reveal a world-wide distribution of certain national influences. Thus British ideas and methods give character in varying degrees to medical schools throughout the Empire, from Canada to the Cape and from Halifax through Hongkong to Bombay. The French or Latin tradition predominates in Southern and Western Europe, in Algeria and Syria, in Central and South America, and in Indo-China. German medicine is found to be fundamental in Central and Northern Europe and in Japan. In addition to these variations due to historical causes, the medical schools of the world display wide differences in resources, personnel, standards, and aims, due to varying racial, economic, governmental, and social conditions.

"International co-operation between medical centers the world over is

tending to make these differences less pronounced. One aim of the Foundation is to facilitate the contacts and inter-communications by which this international exchange of ideas is accomplished. By aiding schools to send official representatives abroad, by inviting commissions from one country to visit another, and by stimulating an international exchange of professors, it is hoped that gradually fruitful interchanges and progressive adaptations will take place."

"Since the Foundation began to have a part in medical education it has aided in varying degrees 117 medical schools in 31 different countries. The policy has been: (1) to help for the most part only such medical centers as are likely to make significant experiments, demonstrate progressive methods, and set standards which will have a wide influence; (2) to contribute only a part of the funds needed for a given project, with the understanding that the remainder will be provided from other sources; (3) to assume no responsibility for administration or supervision of institutions to which gifts have been made; but simply (4) to help faculties and trustees to hasten the realization of plans which they have worked out and in which they have genuine faith. Furthermore, (5) no assistance is ever given to a medical school until after a representative of the Division of Medical Education has visited it and conferred personally with its teachers and administrators.

A Medical Center in the Orient

"The visitor to Peking today who has had no warning in advance is surprised to find on the site of what was once the palace of a Chinese prince a group of beautiful buildings which make a somewhat puzzling impression. At first glance they seem to be of classic Chinese architecture. The curved roofs of glazed tiles, the elaborately decorated eaves, the formal courts, the white marble steps and balustrades, the main gate guarded by archaic lions—all seem characteristically Chinese. But on closer examination other features are noted. The buildings are of brick, two, three, or even four stories high. The windows are large and glazed. Yonder rises a tall chimney evidently belonging to a power-house. Half hidden at one side one recognizes the storage tank of a gas-plant. Here evidently is an institution of the West which has assumed some outer aspects of the East. It is the Peking Union Medical College, built, equipped, and maintained with funds supplied by the Rockefeller Foundation through the China Medical Board.

"In these laboratories, classrooms, and hospital pavilions teaching and research are being carried on in the modern scientific spirit, by well-trained men and women from many parts of the world. The 78 members of the medical school and hospital staffs who hold medical degrees represent 38 medical colleges of 11 different countries. In increasing numbers Chinese scientists and doctors are being welcomed as members of the faculty and advanced to positions of responsibility. In a premedical course students

are being prepared to enter the regular undergraduate medical school. A school of nursing is a part of the plan. Graduate students, Chinese physicians, and medical missionaries on furlough from their stations are pursuing special studies or serving as voluntary assistants. From time to time brief intensive courses are organized in medicine, surgery, the clinical specialties, the fundamental laboratory sciences, and roentgenology for groups of doctors who wish to keep abreast of recent progress. Visiting professors from America and Europe have a share in these courses as well as in other teaching, and bring to the institution the stimulus of their ability, experience, personality, and prestige.

"The main scientific and professional aims of the College are: (1) to provide an undergraduate medical training of high standard, (2) to afford facilities to physicians for graduate work, (3) to give special preparation to prospective medical teachers and investigators, (4) to offer opportunities to staff members and advanced students for research, especially with respect to diseases of the Orient, and (5) in various ways to increase popular knowledge of the methods and meaning of modern medicine. The College is a development of an institution founded under missionary auspices. It seeks to perpetuate ideals of high character and loyal service and to work in sympathetic relations with the missionary movement and with the Chinese themselves.

The International Comradeship of Science

"Science as a common fund to which all nations contribute and from which each may freely draw grows steadily in volume and in value. The world is dotted with centers of research and with individuals who are in quest of truth. These scientists are in frequent communication through the printed page, the visits of fellow workers, and international congresses. One can trace the outlines at least of a vast co-operation which tends more and more to ignore national frontiers. In this team-work of the nations the medical scientists and the sanitarians have an inspiring part. They not only feel the thrill of discovery and of high adventure in coping with the problems which challenge their knowledge and skill, but they know the satisfaction of safeguarding life and of alleviating suffering. They have too a sense of comradeship in enriching 'the patrimony of humanity' and in attacking a common enemy. This spirit not only hastens the progress of science; it offers hope of more sympathetic insight and closer accord in world relations. By promoting the migration of scientists and administrators, by helping to diffuse more rapidly new ideas, by strengthening world centers of teaching and research, in short by fostering medical science and public health as forms of international co-operation, the Rockefeller Foundation seeks to fulfil the purpose of its charter, 'the well-being of mankind throughout the world.'"

TRAINING OF MIDWIVES

An Abstract.¹

By TALIAFERRO CLARK, Surgeon, United States Public Health Service

Despite the higher standards of health administration now obtaining in this country, the great improvement which has been made in the sanitation of domestic and civic environment, the very widespread knowledge of the causes and manner of infections, and the enactment of adequate laws and penalties relating to midwifery practice in many States, the maternal mortality and, to a less-known degree, morbidity rates have steadily increased during the last decade. It is believed by many observers that this condition may be due in large part to inferior obstetrical practice and the lack of obstetrical and lying-in facilities, and in part to the inadequate training of midwives. Although several States have already taken advanced position with regard to the training requirements for licensing midwives, and even in the face of the opposition of a large part of the medical profession of the country, an undue number of mothers are attended in confinement by "grannies" who are without special training or qualifications for such service. It is believed that the following partial abstract of a recent report on the training of midwives in England and other European countries is of timely interest.

GREAT BRITAIN

Until the passing of the midwives act in 1902, amended by the act of 1918, the training and practice of midwives was wholly unregulated and unsupervised by the State. No certificate of qualifications was required in order to practice nor was any course of training prescribed by a recognized authority, though for a number of years certificates in midwifery had been issued by the obstetrical society and were held by the best midwives.

The administration of the midwives act, effective April 1, 1903, was placed in the central midwives board, which was directly responsible to the privy council until 1919, when the supervisory powers were transferred to the Ministry of Health.

At the beginning, three months' training was required, but in June, 1916, this was extended to six months in the case of untrained women and to four months (or, in some cases, three months) for certain trained nurses. The course of training includes the personal delivery and nursing of 20 maternity cases; instruction in elementary anatomy, physiology, and hygiene; the management of labor; the care of the child at and after birth; and the recognition of the most important complications and diseases associated with pregnancy. The curriculum has gradually been broadened

1. Reports on Public Health and Medical Subjects, No. 21: The Training of Midwives. By Janet M. Campbell, Senior Medical Officer for Maternal and Child Welfare, British Ministry of Health. London. 1923.

and now usually includes instruction in ante and post natal care, the care of ophthalmia neonatorum, and, to some extent, the management of infants and young children.

Examinations are partly oral and practical and partly written on the following subjects:

(a) The elementary anatomy and physiology of the female pelvis and its organs.

(b) Pregnancy:

(1) Its hygiene;

(2) Its diseases and complications,
including abortion;

both in relation to

(i) the mother,

(ii) the unborn child.

(c) The symptoms, mechanism, course, and management of natural labor.

(d) The signs that a labor is abnormal.

(e) Hemorrhage: Its varieties and the treatment of each.

(f) Antiseptics in midwifery and the way to prepare and use them.

(g) The management of the puerperal patient, including the use of the clinical thermometer and of the catheter and the taking of the pulse.

(h) The management (including the feeding) of infants.

(i) Signs of the diseases which may develop during the first 10 days, including ophthalmia and pemphigus and other skin eruptions.

(j) The duties of the midwife as described in the regulations, including cooperation with health agencies.

(k) Obstetric emergencies, and how the midwife should deal with them until the arrival of a doctor. This will include some knowledge of the drugs commonly needed in such cases and of the mode of their administration.

(l) Puerperal fevers, their nature, causes, and symptoms.

(m) The venereal diseases (syphilis and gonorrhea) in relation to their signs, symptoms, and dangers in women and children and to the risks of contagion to others.

(n) The disinfection of person, clothing, and appliances.

(o) Elementary physiology and the principles of hygiene and sanitation as regards home, food, and person.

(p) The examination of the urine.

(q) The care of children born apparently lifeless.

In 1919 the board of education was authorized to contribute toward the cost of training midwives, and, with certain exceptions, grants in aid are limited to midwives intending to practice midwifery and are paid to training institutions approved by the board.

It has long been recognized that even the extended period of six

months is insufficient for the satisfactory education of a student in midwifery, and a number of training schools require their pupils to remain for a rather longer time. Mechanical expertness in normal delivery is far from sufficient fully to equip the midwife. "She should be competent to make a sufficiently careful examination after labor to make sure that the placenta and membranes are complete, and that there is no laceration of the perineum or vagina which needs treatment. * * * To be a safe and satisfactory attendant at a confinement, the midwife should have a wide knowledge of midwifery as a whole, a clear appreciation of the possible significance of such unfavorable signs or symptoms as may arise, and a sound understanding of the first-aid treatment to which she may properly have recourse pending the arrival of the doctor."

If six months' study was insufficient properly to equip a midwife in the past, it is still less adequate in the light of modern development. Many pupil midwives are women of limited education, who learn with difficulty, are likely to forget much of the theory taught, and to remember clearly little but what they learn by practical work. Constant practice and repetition are necessary to inculcate habits of cleanliness and antisepsis, and a reasonably long period of time is required in order to establish such habits.

FRANCE

The requirements for the training of midwives appear still to rest on the provision contained in the law as to the practice of medicine, of March 10, 1803 (19 ventose an. XI), article 32 of which is as follows:

Pupils midwives shall be examined by the committee on the theory and practice of accouchements, on the accidents which may precede, accompany, or follow confinement, and on measures for remedying them.

The law of November 30, 1892, provides that a midwife may not practice unless she holds the diploma granted by the French Government. The training required at the present time is governed by the decree of January 9, 1917. The course of training lasts two years and includes both theoretical and practical teaching. No age is fixed for enadidates undertaking the course of studies. Candidates for a diploma may begin to train in a faculty school, or preparatory medical school, or a maternity home which is subject, as regards the training of pupil midwives, to the inspection of officials appointed for this purpose by the Ministry of Public Instruction. The second year may be spent only in a maternity home specially approved by the Ministers of Public Instruction and the Interior.

Pupil midwives are required to pass an examination at the end of each of the two years of training. The subjects of examination are laid down in two decrees issued on January 11, 1917. In addition to documentary evidence of age and fitness and adequate elementary and secondary education, pupils are examined at the end of the first year on anatomy,

physiology, and pathology. At the end of the second year the examination comprises a theoretical test in anatomy and physiology of the organs of reproduction; elementary principles of teratology; normal and pathological gestation and the hygiene of normal and multiple gestation; auto-intoxication, albuminuria, etc.; causes of premature interruption of gestation; abdominal palpation and external manipulation; the management of labor; the hygiene of the lying-in-period; the hygiene of infancy and particularly of the first year; prenatal and post-natal care of the child; breast feeding, mixed feeding, artificial feeding, weaning, etc.; vaccination; and venesection. Candidates are also examined on the legal obligation of the midwife, notification of infectious diseases, etc.; and are required to pass a clinical test consisting of the examination of a woman in a condition of pregnancy.

BELGIUM

The training of midwives is governed principally by Royal Orders of December 30, 1884. The first of these relates, among other things, to the examination for the diploma of midwife. The subjects of examination, which were revised by a Royal Order of 1908, include anatomy, physiology, the practice of obstetrics, hygiene, and the duties and legal obligations of a midwife. The examination is partly oral and partly written.

The second Royal Order relates to the organization of training institutions for midwives, which are supervised by the Department of the Interior and also by the Provincial Executive. Candidates for admission must be between the ages of 18 and 30 years, but these limits may be waived by the proper authorities in exceptional cases. In addition to furnishing certificates of good conduct and evidence of the consent of parents or guardian, the candidate must undergo an entrance examination on elementary academic subjects.

The course of instruction is two years and includes both theory and practice. Clinical instruction begins at the end of the first year. Grants may be allowed to students of limited resources, but grants by the State and Provinces are allowed only in localities where the number of midwives is insufficient, or may be limited to those who bind themselves to practice for a period of five years at least in a specified locality.

A Royal Order of 1912 provides that "Only such persons shall be admitted to the examination as have spent two full years in following a course at a midwives' training institution to which is attached a recognized lying-in hospital, or such persons as have received for two continuous years clinical instruction from a doctor of medicine either in a clinic or in the lying-in ward of a public or private hospital and who have conducted at least 15 confinements under the supervision of the doctor in charge of such institution." This provision came into force two years after the date of its promulgation.

GERMANY

Section 30 (3) of the Imperial Industrial Order of 1901 requires the midwife to obtain a certificate of competency granted after examination by the competent authorities of the State in which she practices. However, each State has its own laws and regulations relating to midwives. Those in force in Prussia, Hamburg, and Baden are probably representative.

Prussia.—The supervision and training of midwives come under the provincial authorities. Prior to the armistice, a six months' course of theoretical and practical training in a recognized institution was usually prescribed, with provision for "refresher courses" to be followed at later stages. Since the armistice, there has been a general demand for a higher educational standard and a longer course of training as well as for an improved status for the midwife and an assured income. Most Provinces have revised their orders so as to provide for a somewhat higher educational standard and a larger training. The educational standard has been raised to "a complete elementary course" and the majority of the Provinces now prescribe nine months' training.

The general law of 1922 deals with the distribution of midwives, their status, and remuneration. A special permit must be secured before a person can settle in any locality in Prussia for the purpose of practicing midwifery. Permits may be issued to a limited number of midwives in a given district, the number being based on the average number of births occurring in the district. However, midwives have the right to practice outside their own district. In addition to attending confinements, they are expected to undertake antenatal supervision, promote breast feeding, and participate in infant welfare work.

In order to insure a reasonable income and encourage better educated women to take up midwifery, a definite schedule of fees, varying with the circumstances of the client, has been fixed, and the midwife may claim an added compensation from the Commune if her annual income, without neglect of duty on her part, falls below a certain minimum.

Provision is made for periodical tests, "refresher courses," and for the payment of traveling and maintenance expenses incurred in attending such courses.

Midwives are placed under the supervision of the government health officer, but in every municipal and rural district a special body for controlling the affairs of midwives must be appointed. These bodies are composed of midwives chosen from the district, representatives of the mothers, representative of the communal authorities, the district physician, and two representatives of the public health insurance administration.

Hamburg.—Under the provisions of a decree relating to the training of midwives, enacted in 1920, a course in training in midwifery is held at the State Midwifery School. Candidates must be between the ages of 20 and 30 and must have received a sound elementary education

in order to undergo a preliminary examination. The course of training lasts one year. An examination is held at the end of nine months, and those candidates who pass this examination spend the remaining three months of their course in practical work.

The course of instruction comprises the following:

- (1) (a) A study of the formation of the human body, specially of the female body; pathology; pregnancy; birth; normal and abnormal confinements and the duties of the midwife in each case.
- (b) The most important diseases of women and infants.
- (c) The feeding and care of healthy infants.
- (2) Pupils, where possible, assist at confinements at clinics.
- (3) The course also comprises teaching with regard to—
 - (a) Special instructions for midwives, and
 - (b) Any other regulations and laws which bear on their work.

The examination is practical, oral, and written. The candidate who fails on one examination is required to undergo further training for a period of three months; but no candidate may enter for examination more than twice. At least every 10 years from the date on which the first examination was taken, the midwife must attend a continuation course lasting at least two weeks, and if she ceases to practice for more than two years she is required to pass an examination before again commencing to practice.

Baden.—By an order of July, 1919, the period of training was extended from six to nine months. Candidates must be between 20 and 30 years of age. They must have received a good elementary education, and are given an entrance examination. During the period of training they must assist at 10 confinements at least in the training institutions, and two in a polyclinic. An oral, practical, and written examination is held at the end of the course. Should a candidate fail to pass, she must undergo a further course of instruction and take a second examination; she may not take the examination more than twice. No provision appears to be made for "refresher courses" in Baden.

DENMARK

One of the departments of the Lying-in Hospital at Copenhagen forms the Danish School for Midwives.

Candidates must be between 20 and 30 years of age. Every year 40 midwives are training in this school. However, in order to insure suitable candidates, pupils are nominated by the district physicians, and from this list of nominees the selection is made by the professor and the director of the National Hospital.

The ordinary period of instruction is one year. In addition, several midwives receive permission annually to take a further year's training

and are appointed assistant midwives, either at the Lying-in Hospital or in a private nursing home where they obtain ample experience.

Pupils receive theoretical instruction daily. Practical instruction is conducted by the chief midwife, under the supervision of the professor. The course includes instruction in disinfection, the principles of anti-sepsis and elementary bacteriology, simple biology and anatomy, the physiology of normal pregnancy and antenatal care, the management of labor, and the recognition of various symptoms of disease and abnormal conditions, together with the circumstances in which a doctor must be called.

Once a year a "refresher course" is held. Midwives and physicians come under the direction of the board of health and the Minister for Justice. The county and district physicians supervise practicing midwives.

SWITZERLAND

Arrangements for training midwives vary in the different Cantons, but those in force in the Canton of St. Gall may be mentioned as an example.

By the decree enacted in 1911 only persons who have successfully attended a course in the lying-in institution of the Canton, or given other proof to the sanitary committee of their qualifications, and have received a certificate from the Canton, will be allowed to practice midwifery.

The sanitary committee provides every year a theoretical and practical course for midwives in the lying-in hospital of the Canton. The course lasts 28 weeks, and the number of pupils attending the course is limited to twenty.

Persons desiring to attend the course must be between the ages of 18 and 32. They must produce their last school report and a doctor's certificate testifying that they are fit persons to be trained as midwives. The pupils may be required to undergo a further educational test. An examination is held on completion of the course.

Midwives who cease to practice for a period of more than three years must attend a continuation course before they resume practice. A midwife forfeits her certificate if she ceases to practice for a period of 10 consecutive years.

Repetition courses are held at a lying-in hospital which last at least 10 days and admit no more than 15 students. Midwives who during the preceding 8 to 10 years have not passed an examination or attended a repetition course are required to attend such a course. Midwives may be required at any time to attend the repetition course if they have shown professional ignorance or committed grave errors in practice. At the repetition course, special attention is paid to practical obstetrics and to the duties of midwives as regards disinfection.

HOLLAND

There are two State training schools for midwives in Holland, one in Amsterdam and one in Rotterdam. The training and the qualifications for admission are the same in both schools.

The training covers a period of three years, and except in rare instances, the pupil midwives must be resident students. They are provided free instruction and board and lodging. Before a candidate is admitted to a training school she must sign a contract to hold herself at the disposal of the Ministry of Labor for a period of two years after she has obtained her diploma as a midwife and to serve as a municipal midwife in any commune or communes determined by the Minister. However, she may be released from this obligation on payment of a stipulated sum.

Candidates for admission to the school must pass a preliminary examination as to their educational qualifications, but may be exempted from this examination if they possess certain educational diplomas. The candidate must be not less than 19 nor more than 26 years of age, though in special circumstances candidates between the ages of 26 and 34 may be admitted. A candidate must present a health certificate and a certificate of good and proper conduct furnished by the burgomaster of the district in which she lives within one month before the day of the examination.

Only theoretical instruction is given during the first year. During the last two years the pupils serve for a period as nurses in the State Hospital for Young Mothers.

The Measure of a Man	
Not—	His God-given part?
“How did he die?”	Was he ever ready
But—	With a word of good cheer,
“How did he live?”	To bring back a smile,
	To banish a tear?”
Not—	Not—
“What did he gain?”	“What was his church?”
But—	Nor—
“What did he give?”	“What was his creed?”
These are the units	But—
To measure the worth	“Had he befriended
Of a man, as a man,	Those really in need?”
Regardless of birth.	
Not—	Not—
“What was his station?”	“What did the sketch
But—	In the newspaper say?”
“Had he a heart?”	But—
And	“How many were sorry
“How did he play	When he passed away?”
	—Kansas City Times.

\$2.00 A Year in Advance

Single Copies 25 Cents

The Chicago Medical Recorder

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TRI-STATE MEDICAL SOCIETY
(ILLINOIS—IOWA—MISSOURI)
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Volume XLVI

CHICAGO, ILL., AUGUST, 1924

Number Seven

PUBLISHED MONTHLY

MEDICAL RECORDER PUBLISHING COMPANY, 81 E. MADISON ST., CHICAGO, ILLINOIS

To Canada and Foreign Countries \$2.50



LIQUOR PRESCRIBING

We are always delighted to read the editorials of the very distinguished editor of the *Journal of the Indiana State Medical Society*. We therefore take pleasure in reprinting an editorial on liquor prescribing in the July issue of the *Indiana Journal*. We agree with him in every particular and only wish we had the Indiana state law in this and every other state in the Union. Instead of urging an unlimited number of prescriptions for physicians, which is simply a crime, the extreme number permitted should be one hundred per year—and there is only one physician in a thousand who can by any possible manner of means justify one hundred prescriptions a year! Any amount above that simply is a form of bootlegging and has degenerated thousands of physicians into barkeepers who openly boast of at least \$1,200 a year income and up to \$2,000 and more made by the sale of their prescriptions to tipplers. There is nothing more common today than for a physician to be approached by a certain class of druggists to sell their books in assignment lots, and nothing is thought of it, it being an everyday occurrence. We regret, therefore, exceedingly that the American Medical Association of delegates should have asked for more leniency to assist the medical bootleggers.

"At the Chicago session of the American Medical Association the House of Delegates took another rap at the prohibition question and placed itself on record as favoring more leniency to doctors in enforcing the legal regulations governing the prescribing of alcoholic beverages for patients. The argument was made that doctors should not be questioned as to the number of prescriptions for alcoholic beverages that are written for patients nor concerning the amount of liquor prescribed for any one patient, and a rather heated debate upon the question was participated in by several delegates who are especially interested in the subject. Here in Indiana we have little interest in the matter, for aside from the Federal law governing prohibition we have a state law that is intended to make things as dry as the Sahara desert, and not even a physician can break the drought through prescription or otherwise.

"The editor of The Journal was not in favor of the Volstead Act, nor can it be said that he was a 'tippler' even though during pre-Volstead days he took a drink occasionally and is not adverse to having one occasionally now if he can get one and feel reasonably safe that the drinking of it will not penalize him by giving him blindness or some other physical disability, but the conviction is forced upon him that prohibition, as poorly as it is enforced, is a good thing for the country. Furthermore, admittedly not a dry advocate, he is not in sympathy with the demand on the part of a certain element in the medical profession that doctors be given the privilege of prescribing alcoholic beverages for their patients with no question asked as to whom those beverages shall be delivered or the amount that shall be prescribed for any individual. If the

doctors in Indiana can get along without prescribing alcoholic beverages for their patients certainly the doctors in other states can do likewise, and it is discriminating legislation for the doctors in one state to be permitted to be liquor prescribers and a like privilege prohibited from the doctors in a neighboring state. However, such inequality does exist, and those doctors who are permitted to prescribe alcoholic beverages for their patients should be satisfied with the privilege, even though it is restricted as to the number of prescriptions that should be written as well as to the quantity that is to be prescribed, for when all is said and done the fact remains that the law has dealt liberally with the members of the medical profession in those states where doctors are given legal permission to prescribe alcoholic beverages, and we must admit that it is not an isolated instance when the law is abused.

"Frankly speaking, there are many members of the medical profession in states where alcoholic beverages may be prescribed by physicians, where the doctors are nothing more than bootleggers, and if we are going to get anywhere with the prohibition officers or the public in our argument that there is a place for alcoholic beverages in the treatment of disease we must demonstrate beyond a question of doubt that we will help to prosecute any doctor who abuses the privilege to the slightest extent or is using his profession as a cloak for bootlegging. When we prove that we are going to uphold the Volstead Act and its interpretation by the Revenue Office, then and then only can we ask for favors that may seem eminently justified in the name of suffering humanity. Some of us may not believe in the Volstead Act, but it is a law, and as a law it should be enforced. We have a habit of attempting to cover up some of the sins of omission and commission in the medical profession by 'whitewashing' them over with some sort of professional tolerance or ethics, but in doing so we fail to do as much for the medical profession as well as the public as we could do if we played square and devoted a little more attention to the disciplining and punishment of derelicts in our profession."

INDUSTRIAL ASPECTS OF HEART DISEASE

If it is true, as has been reported, that one man in fifty has some form of heart disease, the problem of employment for at least a certain number of patients suffering from heart disease cannot well be disregarded. The solution of the problem belongs largely in the field of the social worker, whose ingenuity often succeeds where both the physician and the family fail. The physician usually starts with the dictum that rest is the foremost consideration for the person with heart disease, and the family accepts the advice because of its obvious reasonableness. A damaged mechanism usually cannot continue to operate with safety. This analogy doubtless applies to the human heart when compensation has failed; but when the physiologic situation is less threatening, heart disease and industry are not so incompatible as they are popularly considered to be. Of course, the foremost question concerns the exact diagnosis and the determination of how much work the patient can be expected to do without detriment. Functional tests of various sorts are now available as aids in this connection. Frequently the best test lies in an attempt at the job itself. A recent student of the subject has observed patients with heart disease working successfully at many different occupations, ranging from light clerical work

to the heavy task of the longshoreman. The secret of carrying on successfully, Lincoln concludes, lies in avoiding the features universally taxing to such patients, and in keeping hours of activity and recreation within the boundary in which symptoms appear. There is a well marked tendency among the afflicted to gravitate toward less strenuous occupations after the onset of heart disease. If these persons not only can work but should work, for social as well as for personal reasons, it becomes imperative for industry to find a place for them. White insists that there is no industrial heart disease known. If industry could be relieved of undeserved blame for the occurrence of heart failure among its workers, cooperation in helping the less fit might be more readily secured. The problem of workmen's compensation payments looms large in the eyes of the employer. Physical examinations and medical inspection might help to exempt properly those who should not be held responsible for the onset of symptoms of failure in persons whom they have been considerate enough to take into their employ. The plea for friendly cooperation, including notice to all parties concerned, ought not to remain unheard. A splendid opportunity for lay social service lies open before the trained enthusiast.—*Jour Amer. Med. Assn.*

PERSONAL ITEMS

We are glad to announce that a member of the Editorial Board of THE RECORDER—Major William E. Kendall—has been appointed member of the Advisory Staff of the Commissioner of Health. Commissioner H. N. Bundeson is to be congratulated in getting such able men to assist him to make the Chicago Department of Health the most important in this country.

It is also of interest to note that the military attache of the French Embassy, General George A. L. Dumont, presented on behalf of the French government the cross of officer of the Legion of Honor to Surgeon General Hugh S. Cumming, U. S. Public Health Service. A large and distinguished audience was present at the ceremony at Washington, D. C., July 2, 1924.

Another of our editorial contributors has taken unto himself a wife. Dr. A. M. Corwin was married on Monday, July 21st, at Joliet, the ceremony having been performed at the rectory of St. Mary's church by Rev. Patrick Hennessy, a cousin of the bride. Dr. and Mrs. Corwin departed for a trip East by way of the Great Lakes and Rivers. On their return they will reside at 208 North Boulevard, Oak Park, where they will be at home to their friends after September 1st.

THE MEDICAL RECORDER extends congratulations and good wishes.

DEFENSE TEST—SEPTEMBER 12, 1924

In order to acquaint all officers of the Army of the United States in the Sixth Corps Area (Regular Army, National Guard and Organized Reserve) with the principles and general scope of the "Mobilization Test" to be held on September 12, 1924, in connection with the "Defense Test", the following information and instructions are published for the information and guidance of all concerned:

1. The initial mobilization plans have advanced to such a stage that it is considered advisable by the War Department to subject these plans to a test, and in lieu of extensive field exercises, which for economic reasons cannot be held during this calendar year, the Secretary of War, under the direction of the President of the United States, has decided to initiate within the continental limits of the United States, a Demonstration to consist of Patriotic Exercises by the General Public, and a "Mobilization Test" of the Organized units of the Army of the United States.

2. The manner in which Patriotic Demonstrations will be organized and conducted for the States and local communities was covered in Bulletin No. 1, published in July issue of the MEDICAL RECORDER.

3. *Mobilization Test:*

a. Purpose: The purpose of conducting a mobilization test is:

- (1) To test the practicability of the unit and sub-unit Mobilization Plans of each organized installation and unit assigned this Corps Area for mobilization.
- (2) To test the knowledge of individual personnel assigned to units and installations in the details of the respective Unit and Sub-unit Mobilization Plans.
- (3) To educate the General Public in our Plans and show them the progress of mobilization, and to demonstrate to each local community where units are allocated, the dependency of the unit on the community, i.e.—its demands in personnel, shelter, and other services that would be expected from the local community in the event of a National Emergency declared by Congress.

b. Troops Embraced:—

- (1) A Mobilization Test will be conducted for each of the following:—
 - (a) Sixth Corps Area Headquarters.
 - (b) Corps Area Zone of Interior Installations.
 - (c) All active units of the Regular Army under the Sixth Corps Area control.
 - (d) For all organized units of the National Guard.
 - (e) For all organized units of the Organized Reserves under Corps Area control.
- (2) Reserve Officers of the Territorial Assignment Group remaining unassigned or unattached on September 12,

1924, will attach themselves individually and upon their own initiative, to some nearby Organized Reserve Unit and participate in the Mobilization Test for that Unit, gaining all possible benefit and instruction therefrom. Where this is impracticable unassigned or unattached Reserve Officers will report by letter to these Headquarters on September 12, 1924.

c. Date of Test: This Mobilization Test will be held on September 12, 1924, at an hour to be set by each local organization commander.

d. Assembly—Hour and Place:—

(1) It is essential that all organized units of the Army of the United States participate in the local Patriotic Demonstrations, and for this purpose the hour and place of assembly of the local unit will be fixed by the local commander after consultation with the Local Civilian Committee. His plans should be coordinated with those of the local committee in order to fit in with the local program for Patriotic Demonstrations. Where no Local Civilian Committee has been appointed, the local commander will make all arrangements in accordance with the provisions of paragraph 5, below.

(2) Units will assemble at their home stations, armories, or at the places designated in the local communities, as provided for in the respective Unit and sub-unit Mobilization Plan.

Where this is not practicable for units of the Organized Reserve, the assembly should be at any convenient place in the local community selected for the occasion, which will fit in with the local plans for the Patriotic Demonstration.

e. *Manner of conducting the Mobilization Test:—*

(1) While the patriotic demonstrations and the education of the General Public in the Nation's Military Preparedness Plan, are of prime importance and consideration, it is desired that as many features of the Unit and Sub-unit Mobilization Plans as it may be practicable to test, be tested on September 12, 1924.

(2) This test for all units and installations indicated in paragraph b. above, will cover the following:—

(a) The assembly of the Unit and personnel at home stations, armories, or local communities:—The place and hour of assembly, uniform and equipment will be designated and prescribed by the local commander.

- (b) Muster of the Unit.
 - (c) Inspection and instruction covering the following details of Unit and Sub-unit Mobilization Plan:
 - A. Custody of Plan.
 - B. Details covering hour and place of assembly in the event of mobilization.
 - C. Practicability of the details of the Unit or Sub-unit Plan, relating to the following at local Mobilization Point:—
 - (i) Shelter selected or to be selected for the personnel.
 - (ii) Messing arrangements.
 - (iii) Plans for handling, fitting, storing and issuing of clothing and supplies.
 - (iv) Selection of Headquarters Office and preparation of Organization's records.
 - (v) Sanitation.
 - (vi) Plans covering care of sick.
 - (vii) Arrangements for the administration of the physical examination.
 - (viii) Arrangements for local recruiting and for the reception of men from the local draft boards.
 - (ix) Plans covering the training of the local unit.
 For the Company, Battery or Troop.
 For the Battalion or Squadron.
 For the Regiment.
 To include the training areas and target ranges selected or to be selected for the Company, Battalion or Regiment.
 - (x) The detail of officers authorized to contract indebtedness on the part of the United States.
 - (xi) Manner of notification and putting the mobilization plan into effect.
 - (xii) Reports and revision of Plan.
- (3) The main idea of this Test as outlined above, is to educate the personnel of each unit and sub-unit in the details of the local mobilization.

- (a) For the Corp Area Headquarters, each Chief of Section and service should assemble the personnel pertaining to his section including the Reserve Officers, tentatively selected for assignment, and explain the duties and details outlined in the sub-unit plan for his section.
 - (b) For the Corps Area Zone of Interior Installations, the officer responsible for each Unit and Sub-unit Plan, for Posts, Camps, Station Hospitals and Supply Points, should assemble the personnel pertaining to his installation, (including Reserve Officers assigned and tentatively selected for assignment) and explain the duties and details outlined in the Unit and Sub-unit Plans.
 - (c) Regular Army, National Guard and Organized Reserve Units should be assembled at the Posts, Armories and local communities, and the provisions of the Unit and Sub-unit plans explained in detail. Appropriate talks explaining the details of mobilization for the Regular Army, National Guard, and Organized Reserve will be prepared by these Headquarters and issued later, to be used by all Unit and Sub-unit Commanders for this occasion.
 - (d) Where it is impracticable for Reserve Officers to assemble at the local mobilization point of the Unit to which assigned, they will report by letter or telephone to their unit commander, and attach themselves individually and upon their own initiative to a nearby Organized Reserve Unit and participate in the Mobilization Test for that Unit. Where Reserve Officers are assigned to Regular Army units, they will assemble when practicable, with the Regular Army Unit to which assigned for the test, otherwise making reports to unit commanders as above.
 - (e) In order that individuals and organizations may be available for patriotic demonstrations on September 12, the check of equipment contemplated in War Department Regulations will be omitted.
- (4) Each local commander of National Guard and Organized Reserve Units and for Corps Area Installations (except Corps Area Headquarters and Posts) will plan to fill his organization or installation to war strength with civilians

of military age, between ages of 18 and 45 inclusive, who volunteer to serve for the occasion, and participate in the Mobilization Test and Patriotic Demonstration. These civilians should be procured by a published invitation or such other means as may be agreed upon by the local Unit Commander and the Local Civilian Committee. The method of procuring this personnel should in all cases meet with the approval of the local committee. The local commanders should work with these Committees and keep them fully informed as to the personnel desired, the units the men are to join and the time and place of assembly. There is no objection to a surplus of personnel secured, and without regard to uniforms and equipment, citizens volunteering for this occasion only, should be incorporated in military units for parades or other demonstrations.

- (5) In case a particular Unit or Sub-unit Plan has not been completed by September 12, the Mobilization Test will be conducted just the same, and an explanation of the tentative plans covering shelter, supply, messing, sanitation and training, made to the personnel of the unit.
 - (6) In this connection all officers charged with the preparation of Unit and Sub-unit Plans should complete these plans prior to September 12, 1924.
- f. Expense:—As no Government funds have been provided for this purpose, no expense can be incurred against the United States in conducting this Mobilization Test.
4. Reports to be submitted covering the Patriotic Demonstration and Mobilization Test:—
- a. Advance report covering Patriotic Demonstrations (Form No. 1): Each Senior local Commander, or the Senior Officer in communities where no organization has been allocated or is stationed will submit by mail direct to the Corps Area Commander, so as to arrive not later than 12:00 noon, September 10, 1924, an advance general statement relating to the Patriotic Demonstrations to be held in their community on September 12, 1924. This advance statement will be an estimate or forecast of what will actually take place on September 12, and should be made after consultation with the local Civilian Committee.
These reports will be consolidated by Corps Area Headquarters and sent to the War Department by radio on September 12, 1924.
 - b. Final reports covering Patriotic Demonstrations and Mobilization Test: Each commander charged under Sixth Corps Area

Headquarters with the preparation and execution of a unit or sub-unit Mobilization Plan, will prepare and transmit by mail, on the dates indicated below on forms to be furnished by these headquarters, the following reports dated September 12, 1924:

- (1) Patriotic Demonstrations—Consolidated report relating to Patriotic Demonstrations held at places within your jurisdiction. The report to be made to these headquarters direct on Form No. 2, and will show the following:
 - (a) Personnel of Regular Army, National Guard or Organized Reserves participating in each locality.
 - (b) Approximate numbers of other personnel participating, classified by society groups or other organizations.
 - (c) Character of demonstrations—parades, public meetings, or other ceremonies.
 - (d) Activities relating to securing recruits for the occasion.
 - (e) Local management of demonstrations, how constituted and operated.
 - (f) Interest aroused and general results believed to have been accomplished.
- (2) Mobilization Test: Consolidated strength report under date of September 12, 1924, made on Form No. 3, and showing:
 - (a) Designation of organization and location.
 - (b) Higher Unit to which assigned, location of headquarters.
 - (c) Personnel (officers, men and civilian employees) required for the expansion of each unit, installation or activity during Mobilization.
 - (d) Percent—complete of individual and organizational equipment; of training; of Unit and Sub-unit Plans; and Corps Area Plans (in case of Corps Area Commanders).
 - (e) Remarks relating to organization, strength, equipment and training.
 - (f) Reports on Mobilization Test to be made and transmitted as indicated below:

Transmitted By	Transmitted To	Date
Companies, Batteries or Troops, Battalion and Squadron Headquarters.	Regimental Headquarters or to Battalion or Squadron Headquarters in case there is no Regimental organization.	Sept. 13, 1924.

Regiments and separate or- Division Headquarters. Sept. 14, 1924.
ganizations within a Di-
vision (except R.A. units
to 12th Inf. Brig. Hq.)

5. Duties of Army Officers (Regular Army, National Guard and Organized Reserve) in connection with Patriotic Demonstrations:

- a. The Senior Local Commander (or the Senior Officer, where no organization has been allocated) will make provisions for securing the cooperation of all Officers (Regular Army, National Guard and Organized Reserve) in the communities, in making the occasion of the "Defense Test" a success.
- b. In every case the plan of the local organization commander will be coordinated with the plan of the local civilian Committee, in charge of Patriotic Demonstrations.
- c. If, in any locality, it is impracticable to secure the appointment of a Local Civilian Committee on Patriotic Demonstrations, the Senior Local Commander is charged with the plan for demonstrating with his unit, the progress of Mobilization in his locality.
- d. All officers should cooperate in every possible way and offer their assistance to the local Civilian Committee, in conducting the patriotic demonstrations for the local community.

6. Publicity—All officers of the Regular Army National Guard and Officers' Reserve Corps, should use every opportunity to give wide publicity to our plans for the Defense Test to be held September 12, 1924. They should utilize this opportunity to explain our plans in detail on every occasion to individuals and to patriotic and civic organizations and societies in local communities, basing their talks on the information contained in this Bulletin and in Bulletins No. 1 and 2, on the Defense Test. There is nothing secret about these plans, and the success of the undertaking will depend largely on the interest and loyal cooperation of the American People. This can only be obtained when the people understand the broad principles on which our National Defense Policy is based, the purpose and nature of the Patriotic Demonstration, and the general plan for the Mobilization Test.

7. Final orders and blank forms for reports, covering the "Mobilization Test" will be sent to all Commanders of Units for distribution to Units and Sub-units during the first part of September.

HARRY C. HALE,
Major General, U. S. A., Commanding.



MENTAL TRAINING FOR THE PRE-SCHOOL AGE. Lillian J. Martin, Ph.D.,
Clare de Gruchy. Harr Wagner Publishing Co. San Francisco.
Price \$1.00.

This is a most interesting and practical manual stressing the importance of mental hygiene and to act as a stimulant to study and searching for new and improved methods of child training. The author is a consulting psychologist, and to use her own language "I early found in my mental hygiene work that the mental disabilities in the adult mental hygiene most frequently had their origin in earliest childhood. This, together with the very gratifying results for training children of pre-school age brought to my office for psychological treatment, convinced me that intelligent mental training in the earliest years of life would obviate many mental habits in adult life. Therefore, I decided that the best preventive mental hygiene work I could do would be with the young child, and in 1920 I opened a mental hygiene clinic for pre-school age children in connection with the Public Health Center at Mount Zion Dispensary, San Francisco, which I believe was the first clinic of this kind to be established."

A large number of the cases quoted shows the important work accomplished by this talented author, and we recommend this book as a most desirable volume for physicians, teachers and parents. It discusses the child's training from the standpoint of heredity, interaction of the mental and physical, physical and psychological examination, habit making, habit breaking, mental development and control, dependence versus independence, the responsive versus the resistant attitude, environment, storing the subconscious, delinquent tendencies, punishment and sympathy, and last but not least, the education of the parents.

RADIUM REPORT OF THE MEMORIAL HOSPITAL, New York. Second Series,
1923. Paul B. Hoeber, Inc. New York. Price \$5.00.

The best and most reliable reports regarding the efficiency of radium thus far have been issued by the London Radium Institute, and in recent years by the Memorial Hospital of New York. The second series of the latter hospital is before us and we find among its contributors H. A. Janeway, A. L. Dean, Jr., Douglas Quick, William S. Stone and others. Detailed case histories are submitted, likewise the controls, and the technique is gone into thoroughly. Standards for treatment by radium have now been established and so much experience has been gathered that a very accurate prognosis can now be made in the majority of cases treated.

Regarding cancer cases, cancer of the skin, lip, nose, tongue, lower jaw, tonsil, esophagus, uterus, bladder, larynx and rectum are among those giving the best hope. Only about four percent of carcinomas of the breast with involvement of the axillary glands, remain well for a short period.

But no review can do justice to this interesting book. It should be read carefully, studied and the "*conclusions*" noted. The authors are thoroughly honest in their deductions, which makes this report so reliable. The illustrations are good and satisfactory, and in conclusion, we will quote the titles of a few of the nineteen contributors, namely: Carcinoma of the Rectum; New Growths of the Parotid Gland; Malignant Tumors of the Skin; New Growths of the Eye Ball and Orbit; Followup Results of 908 Cases of Uterine Cancer Treated by Radium; Carcinoma of the Breast; Carcinoma of the Prostate, etc. The concluding chapter is an analysis of radiation therapy in cancer by James Ewing and the concluding sentence of the book is "The outlook for the cancer patient is improving, but the ancient enemy still sits grimly in his stronghold."

THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month). Volume IV, Number I, Philadelphia Number, February, 1924. 302 pages with 90 illustrations. Per clinical year (February, 1924, to December, 1924). Paper \$12.00; cloth \$16.00 net. Philadelphia and London. W. B. Saunders Company.

The February, 1924, number is known as the "Philadelphia Number" and as would be expected is of the very highest order. Among the contributors we may mention Prof. John B. Deaver of the University of Pennsylvania; Prof. Thomas McCrae of Jefferson Medical College; Prof. Henry K. Pancoast, Professor of Roentgenology, University of Pennsylvania; Chevalier Jackson, Harry O. Lott, Robert M. Lukens, Moses Behrend, J. Leslie Davis, W. F. Manges, E. L. Eliason, Temple Fay, Elmer H. Funk, and a number of other distinguished clinicians. Among the contents we note, from the Bronchoscopic Clinic, articles on Pyloroscopy; the Diagnosis of the Foreign Body in the Bronchus; the Relation of Bronchoscopy to the Treatment of Lung Suppuration; the X-ray Diagnosis of Surgical Conditions of the Esophagus; Pulmonary Abscess Following Tonsillectomy, a Cure by Bronchoscopic Drainage; also Radium in Cancer of the Mediastinal Esophagus; Gastrostomy and Improved Technique; Surgery in Diabetics; Puerperal Septicemia; Problems of Cereospinal Pressure; Renal Anomaly; Treatment of Fractured Skull, and many other interesting clinics.

We are glad to find that these splendid clinics now appear in bound form, which is a vast improvement on the old paper covers, and hope it will be continued thus.



Personals.—At the convocation of the University of Wisconsin, June 23, Dr. Frank Billings, Chicago, was awarded the degree of Sc.D.

At the recent meeting of the Chicago Society of Industrial Physicians Dr. J. Chase Stubbs was elected president; Dr. William C. Meacham, vice-president, and Dr. Horace C. Lyman, secretary-treasurer.

Dr. Edith B. Lowry, St. Charles, has been appointed chief of the division of child hygiene of the state department of public health. Dr. Lowry formerly was in the Chicago Health Department, and the U. S. Public Health Service.

At the reunion banquet of the Cook County Hospital Alumni Association the following officers of the Cook County Hospital Intern Alumni Association were elected: Dr. R. W. McNealy, president; Dr. Donald P. Abbott, vice-president, and Dr. Earl A. Zaus, secretary and treasurer.

Dr. Norman Bridge, formerly of Chicago, and donor of the Norman Bridge Laboratory, has subscribed \$150,000 to the Southwest Museum of Art, Los Angeles.

Dr. John A. Hornsby, for several years superintendent of the Michael Reese Hospital, Chicago, has been appointed superintendent of the University of Virginia Hospital, Charlottesville.

Dr. Ralph B. Cobb has been appointed superintendent of the Iroquois Memorial Hospital, Chicago.

Shriners' Hospital Site Purchased.—A 17-acre plot on Oak Park and Belden avenues was purchased for the sum of \$44,000, June 24, as the site for the \$500,000 Shriners' Hospital for Crippled Children (The Journal, June 28, p. 2128).

Social Center.—More than half the \$500,000 wanted has been subscribed toward the erection of a community center, to be opened on the north side in the near future. W. B. Frankenstein, chairman of fund committee, contributed \$100,000. The site has not yet been chosen. The center will be nonsectarian.

Monument to Pasteur.—Plans for the erection of a monument in one of Chicago's parks to the memory of Pasteur have been deferred until the autumn. Dr. Frank Billings is head of the executive committee of the campaign.

Chicago Medical Society.—At the annual meeting of the society, June 17, Dr. Jeremiah H. Walsh was elected president; Dr. Malcolm L. Harris, president-elect; Dr. Clarence W. Leigh, treasurer, and Dr. Roy R. Ferguson, secretary.

American Otological Society.—At the annual meeting of the society in Swampscott, Mass., June 3-5, Dr. Eugene A. Crockett, Boston, was elected president, succeeding Dr. John B. Rae, New York. Dr. Philip D. Kerrison, New York, was elected vice-president and Dr. Thomas J. Harris, New York, secretary-treasurer.

Rockefeller Foundation to Help Finance Medical School.—It is reported that the Rockefeller Foundation, New York City, announced, May 28, that it would finance for five years plans for the development of the medical school of the American University of Beirut, Syria. The appropriation provides for fellowships, laboratory equipment and periodicals.

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Extraneous sounds are excluded; by pressure the bell can be applied in deeply, bringing it closer to the fetal heart—there may also be a little audition from bone conduction. It is made up with a band over the top of the head, with

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Health Authorities Elect.—At the thirty-ninth annual conference of State and Provincial Health Authorities of North America in Lansing, Mich., June 17-18, Dr. James A. Hayne, health commissioner of South Carolina, was elected president; Dr. Byron U. Richards, secretary of the Rhode Island Health Commission, vice-president, and Dr. Richard M. Olin, state health commissioner of Michigan, was reelected secretary-treasurer. The next conference will be held in Washington.

American College of Radiology.—The second meeting of the college was held in Chicago, June 11, with Dr. George E. Pfahler, Philadelphia, president. Dr. William A. Pusey, President of the American Medical Association, gave an address. The new officers elected were: president, Dr. William H. Stewart, New York; president-elect, Dr. Samuel B. Childs, Denver; vice-president, Dr. Preston M. Hickey, Ann Arbor, Mich., and secretary, Dr. Albert Soiland, Los Angeles.

Medical Women's Election.—At the tenth annual meeting of the Medical Women's National Association in Chicago, June 8-10, Dr. Anna E. Blount, Oak Park, Ill., was elected president succeeding Dr. Kate C. Mead, Middletown, Conn.; Dr. Katherine C. Manion, Port Huron, Mich., was elected president elect; Drs. Elizabeth B. Thelberg, Poughkeepsie, N. Y., Frances C. Van Gasken, Philadelphia, and Mary E. D. Dennis, Los Angeles, vice-presidents; Dr. Blanche M. Haines, Lansing, Mich., secretary and Dr. Ethel D. Brown, New York, treasurer.

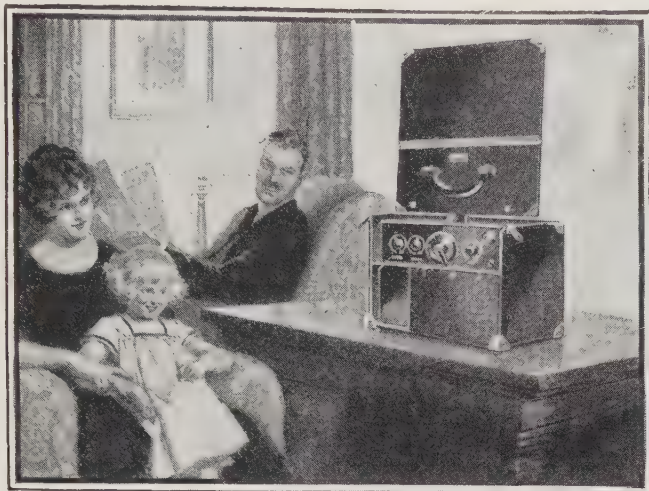
Gifts to College of Physicians.—At a meeting of the College of Physicians, in Philadelphia, June 4, Dr. W. W. Keen presented a portrait of Dr. William J. Taylor on behalf of his friends; Dr. William H. Welch, Baltimore, transferred the custodianship of the Cabinet of Historic Medical Mementos to Dr. Keen, who made also the presentation on behalf of Sir W. Hale White, president of the Royal Society of Medicine, London, of a facsimile of notes on lectures on anatomy in Guy's Hospital in which John Keats was a dresser in 1816.

American Dermatological Association.—At the annual meeting of this association in Minneapolis, June 5-7, Dr. Howard Fox, New York, was elected president; Dr. Andrew Porter Biddle, Detroit, vice-president and Dr. Udo J. Wile, Ann Arbor, Mich., secretary-treasurer (reelected).

Industrial Hygiene Institute.—Fordham University will open an extension institute in industrial hygiene for nurses, the courses being given at the Social Service School on the twenty-eighth floor of the Woolworth Building on Tuesday evenings for fifteen weeks, beginning September 30. All registered nurses are eligible. Applications should be addressed to the Registrar, Room 2866 Woolworth Building, New York City.

Number of Women Physicians Decreasing.—There are six women physicians in the United States to every 100 men physicians, whereas ten years ago women comprised about 10 per cent of the medical profession, according to Dr. Kate C. H. Mead, formerly president of the Medical Women's National Association. Dr. Mead, in addressing that association recently in Chicago, ascribed the decrease in women physicians to the increased cost of medical education and to an increase in opportunities in social and laboratory work which attract women who might otherwise study medicine.

Hebrew University School of Medicine.—Dr. Israel S. Wechsler, New York City, secretary of the American Jewish Physicians' Committee for the building of a medical school as part of the Hebrew University in Palestine, leaves for London, August 5, to engage a medical director for the Microbiologic and Chemical Institute in Jerusalem, the first part of the proposed medical school to be inaugurated. Dr. Wechsler will then go to Palestine to supervise the immediate inauguration of this work.



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The Ravages of a Mad Wolf.—In a village near Turda, in Roumania, a large wolf from the mountains bit several dogs and some people on the night of March 15. The beast was finally killed, though the village was in an annexed district, where the keeping of arms is prohibited. Examination disclosed that the wolf had rabies. All bitten persons were sent to the Pasteur institute at Cluj. After the completion of treatment and having returned home, four, who had had very severe wounds on the head or on the back, near the vertebral column, again presented symptoms of rabies. One ran into the forest, where he was found dead.

Goiter in School Children.—Following a survey by the U. S. Public Health Service, it is stated, that one child in three attending the public and parochial schools of Cincinnati is suffering from enlargement of the thyroid gland. In all, 47,893 children attending sixty-one public and forty-three parochial elementary schools were examined. Of that number, 23,710 were boys and 23,783 girls. Among all the children examined, the prevalence of thyroid enlargement was noted in 15,751 instances, a percentage of 33.2.

Women in Medicine.—The results of the May examination of London University are remarkable evidence of the diligence and success of women students. For the M.B., B.S. examination, which ranks first among the medical degrees of this country, there were thirty-four women out of seventy-nine in the pass list, and three out of ten in the honors list, and a woman carried off the gold medal. The first woman member has been elected to the council of the British Medical Association. She is Dr. Christine Murrell, one of the many medical women trained at the London School of Medicine for Women who have won distinction.

Medical History in Illinois.—Under the auspices of the state medical society a history of medical practice in Illinois is now being compiled. As this history will cover a period of 250 years, all possible assistance is asked as to personal data and experiences, diaries, photographs and documentary mementos of pioneer Illinois physicians. It is requested that all physicians, former residents of Illinois, or descendants of pioneer physicians of the state, communicate with the committee on medical history, Illinois State Medical Society, 6244 North Campbell Avenue, Chicago.

Medical Library Association.—The twenty-seventh annual meeting of the Medical Library Association was held in Chicago, June 9-10. Papers were read by J. Christian Bay of the John Crerar Library; C. Perry Fisher, College of Physicians of Philadelphia; Janet Greene of the Hospital Library and Service Bureau; Carl H. Milam, secretary of the American Library Association; Col. C. F. Wyld, McGill University Faculty of Medicine, Montreal, Que., lecturer in medicine and clinical medicine and demonstrator in pediatrics; Dr. Leroy Crummer, professor of internal medicine, University of Nebraska College of Medicine, Omaha; Margaret Brinton of the Mayo Clinic Library, and William Bebb, D.D.S., Northwestern Dental School, Chicago.

Narcotics Concealed in Brushes Seized.—Narcotics valued at more than \$2,000,000, and concealed in the handles of 5,000 scrubbing brushes, were recently seized at the port of New York shortly after the steamship President Roosevelt docked. H. D. Easterbrook, chief of special agents of the treasury department, who conducted the raid, stated, it is reported, that a German syndicate has been smuggling drugs into the United States for the last two years. A year ago a treasury agent at Bremen, Germany, opened some cases labeled "brushes" and "returned German goods" and found only bricks, which had supposedly been shipped in bond from Trinidad by way of the United States. It was learned a month ago that the same cases have been repacked, shipped from Bremen and consigned to Trinidad by way of the United States. The smugglers'

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scheme was to haul these cases of dope-laden brushes to a garage, and there substitute other cases stenciled in the same manner, but containing brick, and ship them to Trinidad and then back to Germany.

The International Urologic Congress.—The first meeting of the International Urologic Society since its reorganization after the war was held at Paris in 1921, and the second meeting has just been held at Rome. Professor Alessandri presided. The three topics selected for discussion were "Denervation of the Kidneys"; "Vaccine Therapy in Nongonorrheal Urinary Affections," and "Remote Results of Operations for Calculi in Kidneys and Ureters." Removal of the sensory nerve fibers in the pedicle of the kidney, in treatment of rebellious pain in the kidney, elicited a lively discussion, and Legueu reported excellent results without apparent injury of renal function. Ambard has apparently demonstrated in animals that the denervated kidney keeps pace functionally with its sound mate. The reports on protein therapy and vaccine therapy in urinary affections were conflicting, although Rovsing reported 85 per cent cured or materially improved by an autogenous vaccine in 222 cases; 15 per cent were refractory. Pirondini suggested that it might be well to supplement the vaccine made from the urine with a vaccine made from the primary focus elsewhere, in teeth, skin, tonsils, genital organs or colon.

Department of Medicine on Full-Time Basis.—According to announcement made by Dean Loeb at the commencement exercises, the St. Mary's group of hospitals in St. Louis, comprising 600 beds, of which 200 are free, has by agreement become the University Hospital of the St. Louis University School of Medicine, the university having full control of the medical and educational activities. The first step in the complete establishment of this relationship has been the organization of the department of medicine on a full-time basis. In addition to the instructors who have been previously conducting the department, the following full-time physicians have been appointed: Ralph A. Kinsella, professor of medicine and director of the department, formerly associate professor and acting head of the medical department of Washington University; Goronwy O. Broun, associate professor of medicine, formerly instructor in medicine at Harvard University and resident physician at the Boston City Hospital; Charles H. Hitchcock, assistant professor of medicine; Alfred P. Briggs, instructor in medicine, and Octavio Garcia, instructor in medicine.

A Study of Foster Children.—The State Charities Aid Association of New York has completed a three-year study of 910 children who have been placed in homes by that association in the twenty-five years of its existence and who are now 18 years or more of age. The study was made possible by a grant from the Laura Spelman Rockefeller Memorial Fund and is said to be the first of its kind made on such a large scale in this country. It shows that 615, or 77 per cent, of these children are now capable of self-support and are living in accordance with the moral standards of the community, that is "they turned out to be decent, law abiding citizens, respected in their communities." The other 23 per cent range from those who are harmless to those who are actively harmful and incapable of meeting the ordinary demands of personal and community obligations. There were 315 children of the 910 who were less than 5 years of age when they were placed. Of those who turned out to be capable, 86 per cent were less than 5 years old when placed; 7.6 per cent of the children placed when over 5 years of age were anti-social, while only 2.6 per cent of the children who were less than 5 when placed were anti-social. The homes in which these children were placed were carefully selected by the association, and the majority belonged to people of the "average middle group," with moderate income; about 15 per cent of the homes were above the average, and about 12 per cent were distinctly mediocre; 35 per cent of the children studied



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whose present situation is known are still in their foster homes; 31 per cent are married and have their own homes, and 24 per cent are working away from home.

Typhoid Fever in the Large Cities of the United States, 1923.—In the issue of February 2, 1924, the Journal of the American Medical Association presents its twelfth annual summary of typhoid fever mortality in the cities of the United States that had more than 100,000 population in 1920. The 69 cities in this class include more than one-fourth of the total population of the United States, and one-sixth of the total population live in cities of more than 500,000 population.

These 69 cities, for which records are available for the last four years, show a slight typhoid reduction in 1923 as compared with 1922. The average death rates per 100,000 from typhoid fever for these cities for the years 1920,¹ 1921, 1922, and 1923 were, respectively, 3.7, 4.0, 3.3, and 3.2. The rate for 57 of the cities of this group, for which the records extend back to 1910, show a slightly higher total typhoid death rate for 1923 than that for 1922, but, with the single exception of that year, the rate for 1923 was the lowest ever recorded.

Group 1, population more than 500,000 (12 cities).—The average death rate per 100,000 in this group was 2.5. For the first time since these summaries were begun, every city in the group had a rate under 5, the highest rate being 4.3, for Baltimore and Buffalo, and the lowest, 1.0, for Boston. Although 1922 marked a record low rate for the several cities in this group, further improvement was shown in 1923.

For the first time since 1916, Chicago had a water-borne outbreak. This was restricted to a district served by one of the pumping stations drawing water from Lake Michigan. It is stated that "although Lake Michigan received unusual pollution as the result of torrential rains in the autumn of 1923, chlorination seems to have proved an effectual safeguard except at the one pumping station."

Group 2, population 300,000 to 500,000 (9 cities).—The average rate for this group was 3.8. Only three of the nine cities in this group recorded a higher rate than that for 1922. The rates varied between 1.0 for Minneapolis and Milwaukee, to 8.8 for New Orleans. The New Orleans rate shows a 13 per cent reduction from that for 1922, and is the lowest recorded in the 12-year period; and Milwaukee, with a water supply at times highly polluted, but protected by chlorination, shares honors with Minneapolis for the lowest rate.

Group 3, population 200,000 to 300,000 (12 cities).—This group had an average typhoid death rate for 1923 of 4.1 per 100,000. The rates for cities in this group vary between 0.8 for Providence (with only 2 deaths) to 6.0 for Toledo (excluding Atlanta, which had a very bad year, having a rate of 17.1—a higher rate than the average for the period 1916-1920).

Group 4, population 150,000 to 200,000 (10 cities).—The average rate for this group of cities was 6.7, ranging between 2.2 for Syracuse to 13.6 for Memphis. Birmingham had a rate of 7.7 as compared with 12.5 for 1922 and 17.0 for 1921; whereas both Dallas and Memphis showed increases. The rate for Dallas was 11.6 in 1923 as compared with 5.8 in 1922, and the rate for Memphis was 13.6 in 1923, as against 8.9 in 1922.

Group 5, population 125,000 to 150,000 (9 cities).—The average rate for cities in Group 5 was 2.8, the rates varying from 0.7 for Hartford (recording but 1 death from typhoid) to 7.8 for Houston.

Group 6, population 100,000 to 125,000 (17 cities).—This group contains the only city in the list of 69 cities without a death from typhoid fever during 1923, this honor going to Norfolk, Va. The highest rates were recorded for Nashville (12.3) and Trenton (11.8), which cities also had the highest rates in this group in 1922. Reading, Pa., had a rate of 2.7, as compared with 9.2 in 1922 and 11.7 in 1921. This average rate for this group for 1923 was 4.2.



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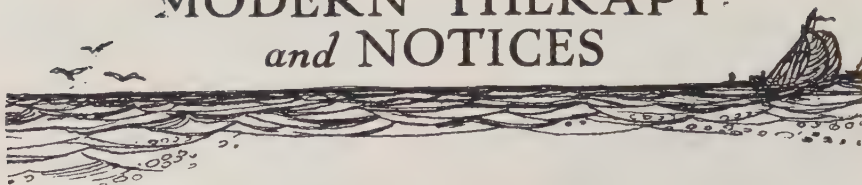
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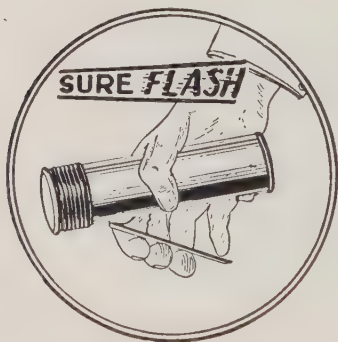


INTERESTING READING

In the July issue of *The Bloodless Phlebotomist* there is an article entitled "Is this the oldest prescription in the world?" The prescription in question, which is inscribed upon a tablet of stone, now in the Metropolitan Museum of Art, is alleged to be 3,400 years old, and has among its ingredients semi-precious stones, which were ground to powder. The article is illustrated by a very good picture of the tablet. The inscription upon the stone is as clear and neat today as when it was given by a doctor-priest to a subject of one of the ancient pharaohs, 1,500 years or more before the Christian era. This is a matter which is of interest to all physicians. Any who have not read the article in the *Phlebotomist* may obtain a copy of that journal by addressing The Bloodless Phlebotomist, 22 Grand St., New York City.

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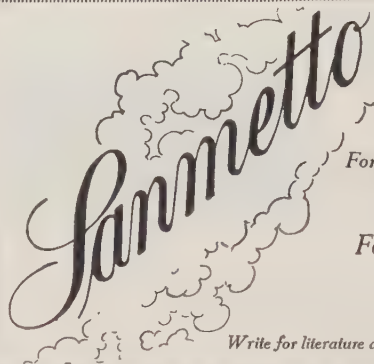
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Index to Advertisers



Antiphlogistine	PAGE
Arlington Chemical Co.....	7
Armour & Co.....	14
	16
Baltimore Hotel	9
Berlitz School of Languages.....	6
Breitenbach Co.Chemists	2
Bristol-Myers Co.Chemists	29
Campho-Phenique Company.....	Second cover
Cavendish Chemical Corporation.....	16
Chicago Laboratory	3
Chicago-Winfield Sanatorium.....	15
Columbus Laboratories	38
Davis, Dr. Effa V.....Maternity Hospital	14
Denver Chem. Mfg. Co.....Antiphlogistine	7
Elms Hotel	10
Emerson Drug Co.....Bromo Seltzer	34
Empire Hotel	8
Farwell & Rhines.....Gluten Flour	29
Fellows	Hypophosphites
	1
First Trust & Savings Bank.....	4
French Lick Springs.....Pluto Water	31
	.
Hannibal Pharmacal Co.....Neet	33
Horlick's Malted Milk.....	12
Keller, Ella Louise.....Electrolysis	33
Kenilworth Sanitarium	13

INDEX TO ADVERTISERS—Continued

	PAGE
Manger Hotels	9
McDonald Rest Cure.....	14
Medical Protective Co.....	11
Melbourne Hotel	31
Mellier Drug Co.....Tongaline	15
Mentor Association	8
Merriam, G. & C.....Dictionary	11
Micajah & Co.....Medicated Wafers	29
Mountain Valley Water Co.....	12
Mulford, H. K.....Chemists	Back cover
North Shore Health Resort.....	14
Oconomowoc Health Resort.....	13
Od. Chemical Company.....	34
Operadio Corporation	25
Park, Inc.Park Avenue Hotel.....	27
Paradox Radium Laboratories.....	33
Parke Davis & Co.....Pharmacists	First cover
Peacock Chemical Company.....	37
People's Hospital	14
Pershing Hotel	8
Physicians Supply & Drug Co.....	33
PlattsChlorides	Second cover
Plessner, PaulTaurocol	5
Printing Products Corporation.....	2
Purdue, Frederick Co.....	23
Quaker Oats	27-29
Quinlan, D. B.....	12
Reed & Carnick.....	37
Sharp & Dohme.....	5
Sharp & Smith.....Surgical Instruments	23
Smith, Martin H., Company.....	Third cover
Storm, Katherine L., M. D.....Abdominal Supporters	2
Sultan Drug Company.....Cactina Pillets	34
Tuller Hotel	11
Waukesha Springs Sanitarium.....	13
Wilgus Sanitarium	13



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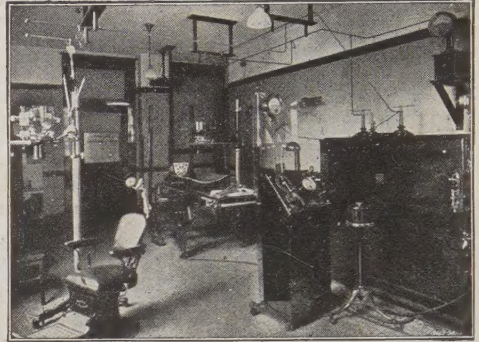
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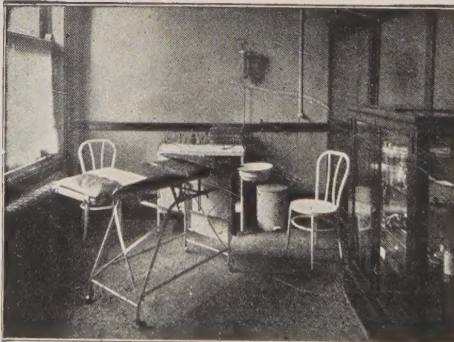
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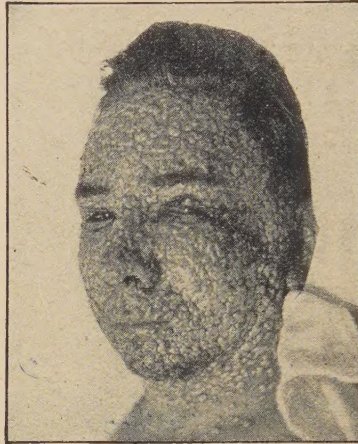
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Photo, courtesy Michigan Department of Health, 1924

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